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the American Perfumer
and ESSENTIAL OIL REVIEW
COSMETICS · SOAPS · FLAVORS

JULY 1951
IN TWO SECTIONS
SECTION I

Sect. 2. Index for Jan.–June 1951
30
58

JUL 1951
DEPARTMENT OF AGRICULTURE

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the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

Established 1906

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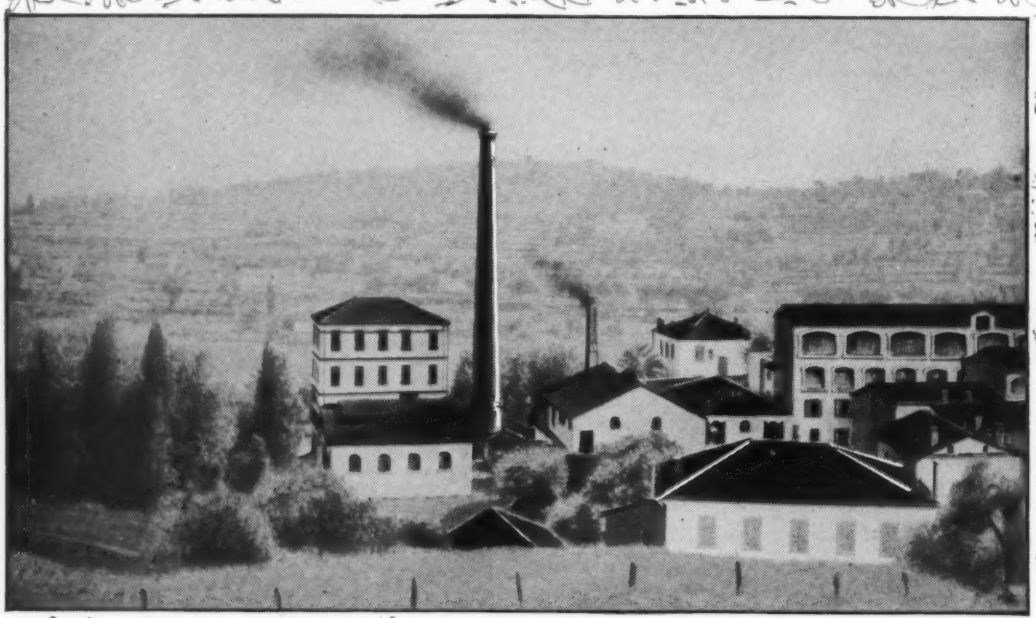

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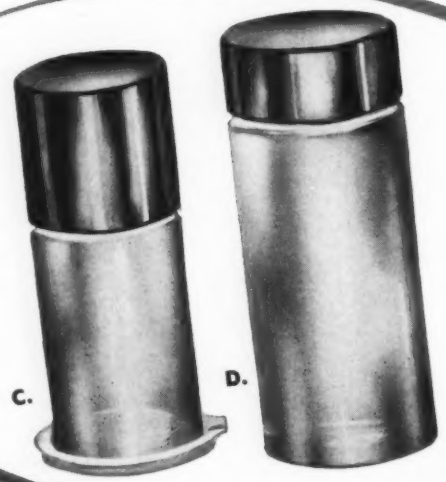

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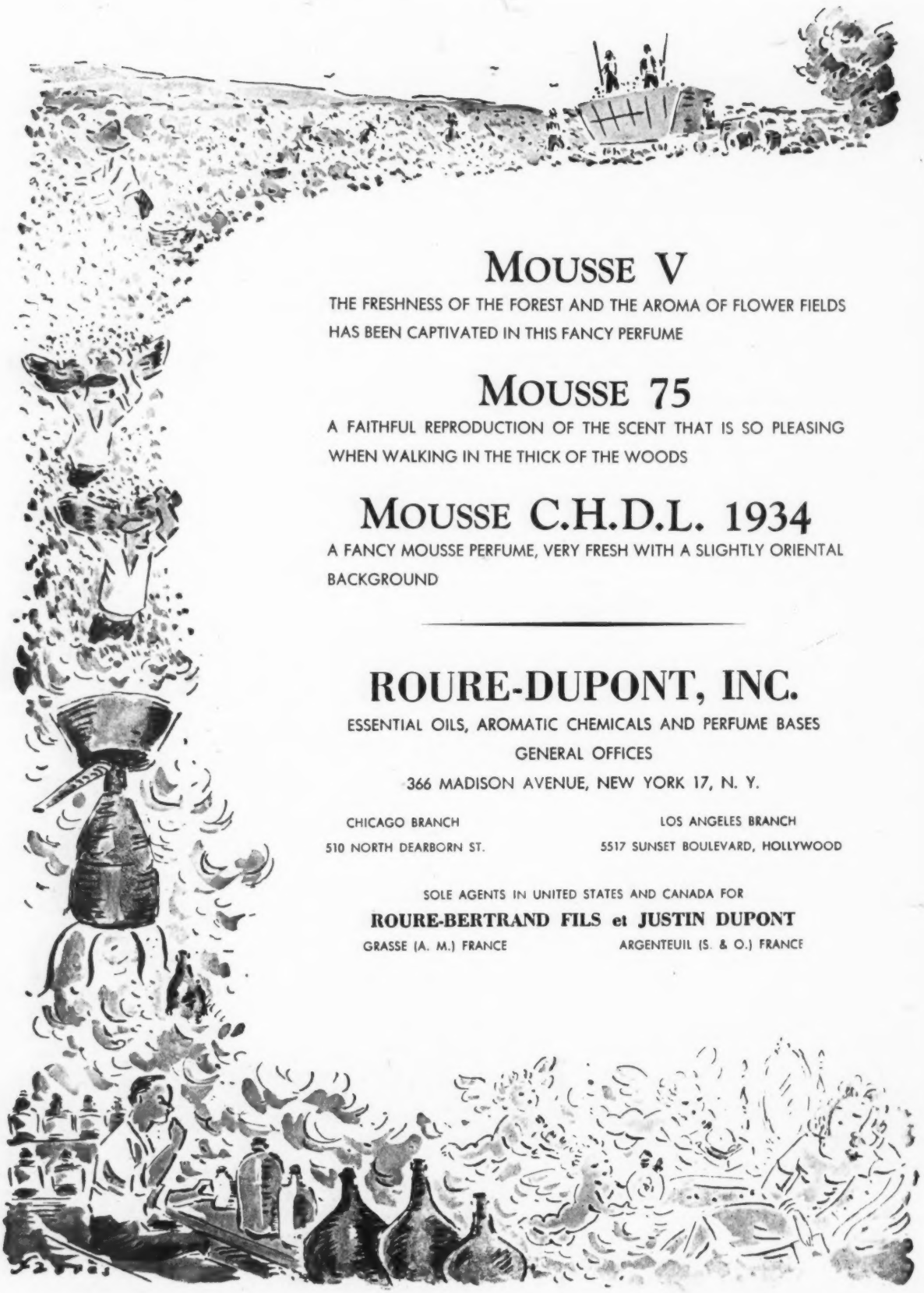

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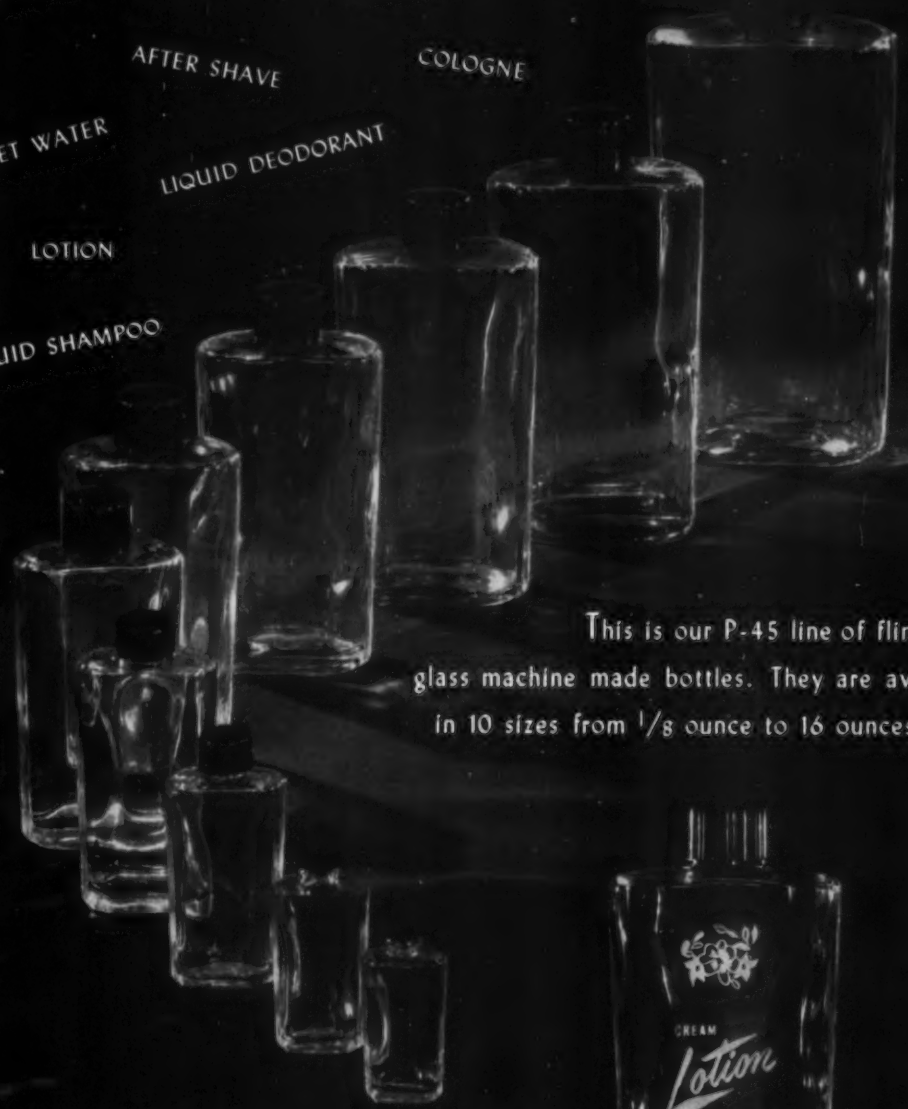

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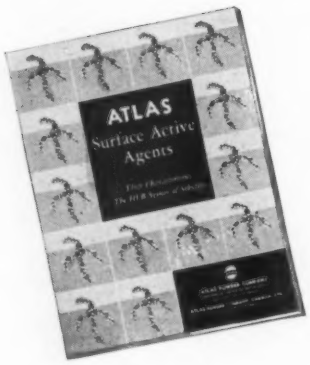

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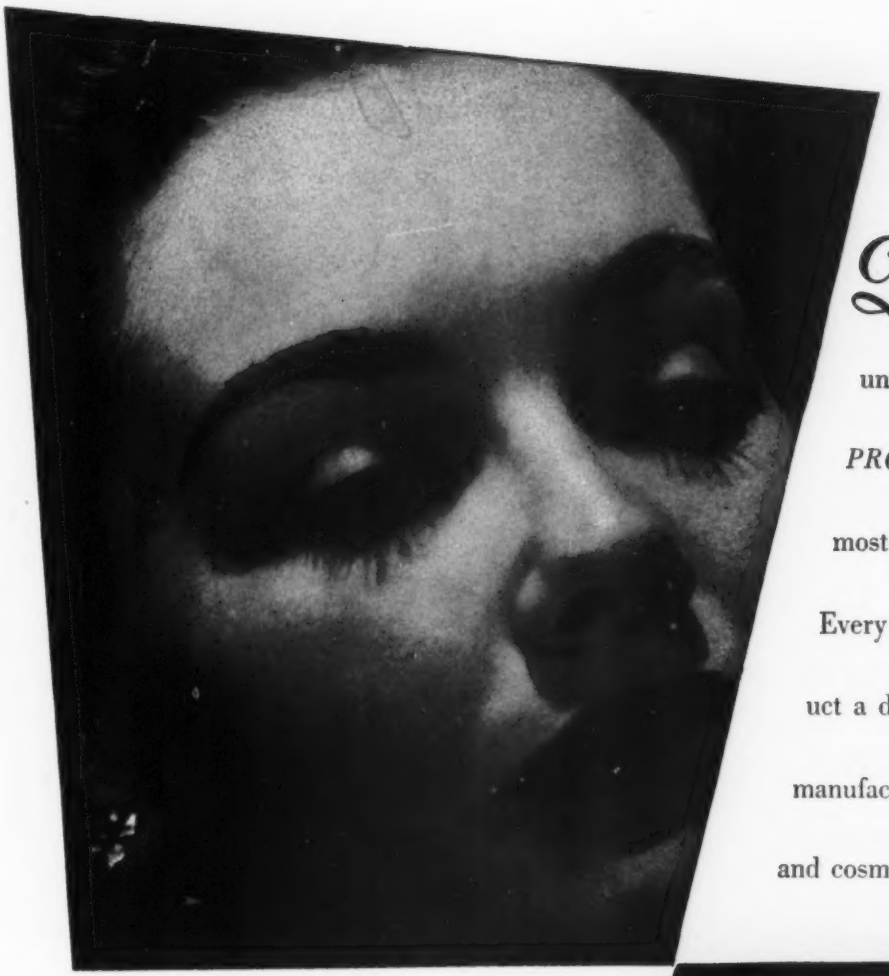

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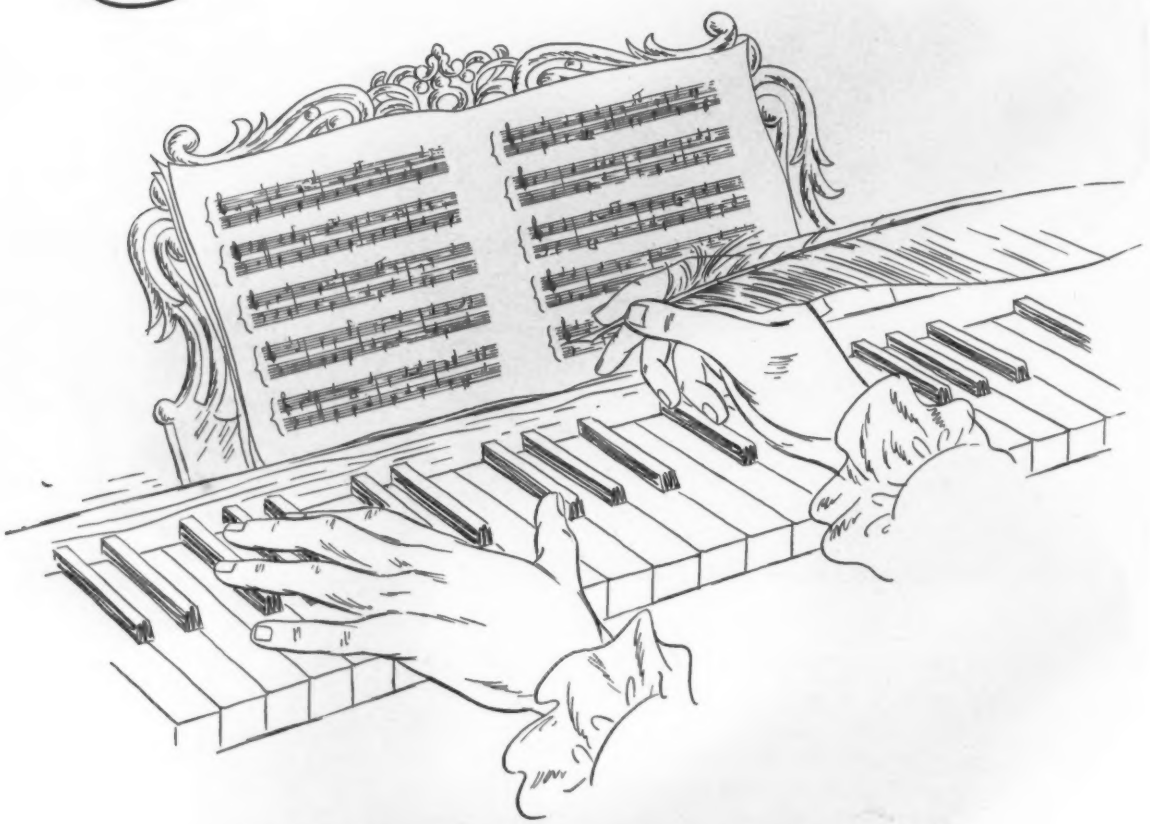

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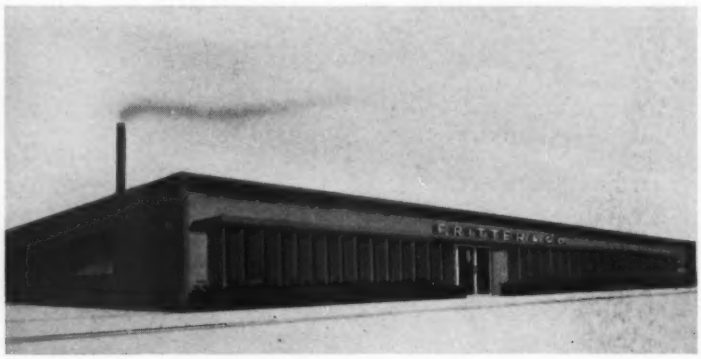

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Desiderata

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M. G. deNavarre at work in his laboratory

Powdered Deodorants

One of the drawbacks to antiperspirants and deodorant creams or liquids is the inconvenience you have from using the fingers somewhere in the application. This is messy and undesirable.

What is wrong with a powdered deodorant or antiperspirant? Admittedly those on the market are doing very little volume, but fundamentally they are ideal because they can be readily applied, are not messy and don't have the grief in formulation, manufacture and shelf life, common to so many of the creams.

Antiperspirant liquids were enjoying less than 10 per cent of the antiperspirant market until one spray bottle product appeared on the market. There is no reason why a similar thing can't take place with powders.

Enzyme Dermatoses

Writing in our worthy British contemporary, *Soap, Perfumery and Cometics*, Freddy Wells in his May editorial refers to some work done at the University of Malaya, Singapore, by Dr. Ivan Polunin, reported originally from *Nature*, March 17, 1951. The article refers to workers who cut up pineapples in the canneries who suffer this particular dermatosis from the raw juice. Little effect results from gentle application of the juice but rubbing produces marked changes of the skin. The effect has been definitely pinned on bromelin, the proteolytic enzyme of pineapple.

This should serve as a warning to all those who either are making or are thinking of making cosmetics whether containing raw pineapple juice, bromelin and possibly other protelytically enzymes such as that found in the juice of the papaya namely papain. A number of papaya cosmetics are on the American market and while this writer has not seen the products or their labeling it is quite possible that in some of the preparations the application is made with "rubbing." This could conceivably produce the same results reported by Polunin.

American Castor Oil

In less than one generation industrial users of castor oil have been hit twice by restrictions on the use of castor oil for commercial purposes. It is therefore very encouraging to learn that the Texas Experiment Station as early as 1940 started work on producing crops of castor beans in that State. By 1950 about 1500 acres were under cultivation. Future plans by one of the big castor oil companies will require 500,000 acres for this particular company; they will supply the seeds for such a project. They will also build a new hulling plant to take the new capacity. While 504 pounds of beans have been produced per acre, improved varieties should increase the yield.

Castor beans are a good crop for other states than Texas. It is hoped that some day this country will be independent on this item.

Tetrahydrofurfuryl Esters in Lipstick

Considerable misunderstanding exists regarding the use of THFA esters as bromo acid solvents in lipstick as a result of the existence of Gottfried's patents in this country and elsewhere.

Use of these materials in the U.S. and Canada is possible if they are bought from a particular British supplier who has been permitted to sell them under these patents. For most companies, this will solve a difficult problem.

Chlorophyll

Nature's green coloring substance in plants is chlorophyll; it has been claimed to be useful for practically all the ailments of man. It is said to have all kinds of therapeutic effects, enhance space deodorants containing formaldehyde, more recently to act as a general body deodorant when taken internally in tablet form.

In discussing such tablet deodorants, *Consumers' Research Bulletin*, June 1951, page 3, claims that their price is not low and that "a more economical deodorant for external use is boric acid in powder form readily available at drug stores" (does C.R. know that boric acid has been responsible for the death of a number of babies and that at a recent meeting of the College of American Pathologists, Maryland's chief medical examiner, Dr. R. S. Fisher claims that the substance can kill . . . by external application to infants in a similar manner that C.R. suggests for deodorant effect. Admittedly infants are more readily poisoned than adults, but toxicity is still toxicity).

After some consideration on the part of the American Medical Association, New and Non-official Remedies accept water soluble chlorophyll derivatives saying that they "may aid in producing a clean granulated wound base and a condition suitable for normal repair of tissue. Conclusive evidence

Carol Channing as Lorelei Lee in "Gentlemen Prefer Blondes".

but GENTLEMEN CHEMISTS may prefer Glycol Fatty Acid Esters

This gal may not know an emulsion from a dispersion, but—most chemists know how Polyglycol 400 Monolaurate is used as an emulsifier in insecticides, or how Carbowax 1500 Mono Stearate is used as a dispersing agent in pharmaceuticals. As a matter of fact, if you are a cosmetic chemist, you might be able to tell a rubber chemist or a paper chemist a thing or two about Glycol Stearates and Laurates.

You'll notice in the table below how their uses change as their molecular weights increase. It is a fact that when it comes to Polyhydric Alcohol Fatty Acid Esters, Glyco's laboratory and information file may help you. Why not write for our Ester catalog containing information on how these versatile products might help solve one of your problems? Address Dept. F751.

POLYHYDRIC ALCOHOL FATTY ACID ESTERS

PRODUCT	FIELD	USE
Ethylene Glycol Mono Stearate	Cosmetics	Opacifier
Diglycol Laurate	Paper Textiles	Defoamer Emulsifier
Diglycol Stearate	Cosmetics Paper Metals	Emulsifier Plasticizer Lubricant
Poly Glycol 200 Mono Laurate	Plastics	Viscosity-Stabilizer
Poly Glycol 400 Mono Laurate	Insecticides General Plastics	Emulsifier Non-ionic wetting agent Anti-static agent
Poly Glycol 400 Mono Stearate	Textiles Pharmaceuticals	Suspending and thickening agent Suspending agent
Poly Glycol 400 Distearate	Shampoos	Thickener and foam stabilizer
Poly Glycol 600 Mono Laurate	Detergents	Non-ionic surfactant
Carbowax 1000 Mono Stearate	Paper Coating	Anti-gelling agent
Carbowax 1500 Mono Stearate	Pharmaceuticals	Dispersing agent
Carbowax 4000 Mono Stearate	Electrical Insulation Textiles	Water soluble lubricant Thickener

GLYCO PRODUCTS CO., Inc.
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CHEMICALS BY GLYCO

is lacking that chlorophyll derivatives stimulate granulation or epithelialization beyond the normal rate of healing or that such derivatives are more effective than other agents for that purpose." A 0.2 per cent solution of water soluble chlorophyll has been accepted.

Questions and Answers

880: Copper Plating

Q. I have a double jacketted copper kettle of about 100 lb. capacity which is tin coated but unfortunately some of the tin is wearing, showing the copper metal which blackens the cream in spots at the lower portion. I make all my creams in this container using the various waxes using borac in the water phase. It would interest me to know if it would be an advantage to have this container electro plated with nickel, or chrome. *R. B. Y. Illinois*

A. Chrome plating is very satisfactory on copper if done properly. If possible you should try to get a tin plating since this leaves a better all around surface inside the tank.

881: Shaving Soap Bowl

Q. Will you please indicate, if possible, the most satisfactory method for producing a shaving bowl by pouring the soap directly into the bowl, rather than by casting it in moulds and then placing it in bowls after it has hardened. *R. C. England*

A. Pouring the hot soap mass into the bowl is not the best idea because it tends to shrink away from the bowl on cooling. Generally a soap cake is placed into the bowl and sometimes an adhesive is used in the bottom to hold it into place. Very often the cake is then snugly pressed into the bowl. We have done some experimental work using a mixture of soda, potash and triethanolamine with a fatty acid blend similar to that used in shaving cream, producing the soap with about 15 per cent moisture, pouring while warm. The soap is substantially aerated by this process and is really not too satisfactory.

882: Lather Shaving Soap

Q. I have for several years been preparing an excellent shaving soap, lather type. It has one objection that has made me hesitate to offer it for sale: it dries out too rapidly when on the face, though it does not do that while in the jar. Could you advise me if there is a way that I might overcome this objection? I have tried a number of things but do not seem to have struck the key. It may be that I am expecting a little too much. It is superior in several respects, so I have the wish to make it "perfect." *M.F.Y. Calif.*

A. The only way we can intelligently comment on your shaving cream problem is to have you send us a sample of your cream for consideration, the complete formula, and we would like to have you tell us some of the things that you have tried and have not worked. Upon receipt of this additional information and sample we may be able to help you.

883: Permanent Wave Cream

Q. We are taking the liberty of sending you a tube of Hoy's Permanent Wave Cream. Your advice relating to its composition and process for making it will be very much appreciated. *T. B. C. Mich.*

A. This is an absorption base type of cream containing ammonium hydroxide and sodium sulfite. In actual manufacture the cream contains 50 per cent of waving solution which in itself is double strength. The cream is emulsified and homogenized. A good starting formula will require about 30 per cent absorption base, 5 per cent lanolin, 3 per cent beeswax and 12 per cent light mineral oil. Melt the fats together at 70° C. and gradually add 50 per cent of a double strength permanent wave solution, at the same temperature, mix and homogenize at about 45° C.

884: Hair Dressing Formulation

Q. The following is the basic formula for the solid cream hair dressing: (formula then given).
How can I overcome the discoloration? How can I use the same base to make liquid cream dressing? This is a warm humid area, and the problem of the dispersion of the dressing over the whole head is great. Can you suggest a substance to be incorporated into the dressing to prevent this? *S. R. Maryland*

A. The discoloration in your solid hair dressing is no doubt due to the reaction of the euresol with traces of iron picked up from your other raw materials, perfume or equipment. Sometimes incorporated traces of citric acid will overcome this. A recent report suggested use of ascorbic acid for the same purpose. We cannot imagine a formula that will give a solid hair dressing, and with slight modification give a liquid one as well.

885: Ground Bark Separation

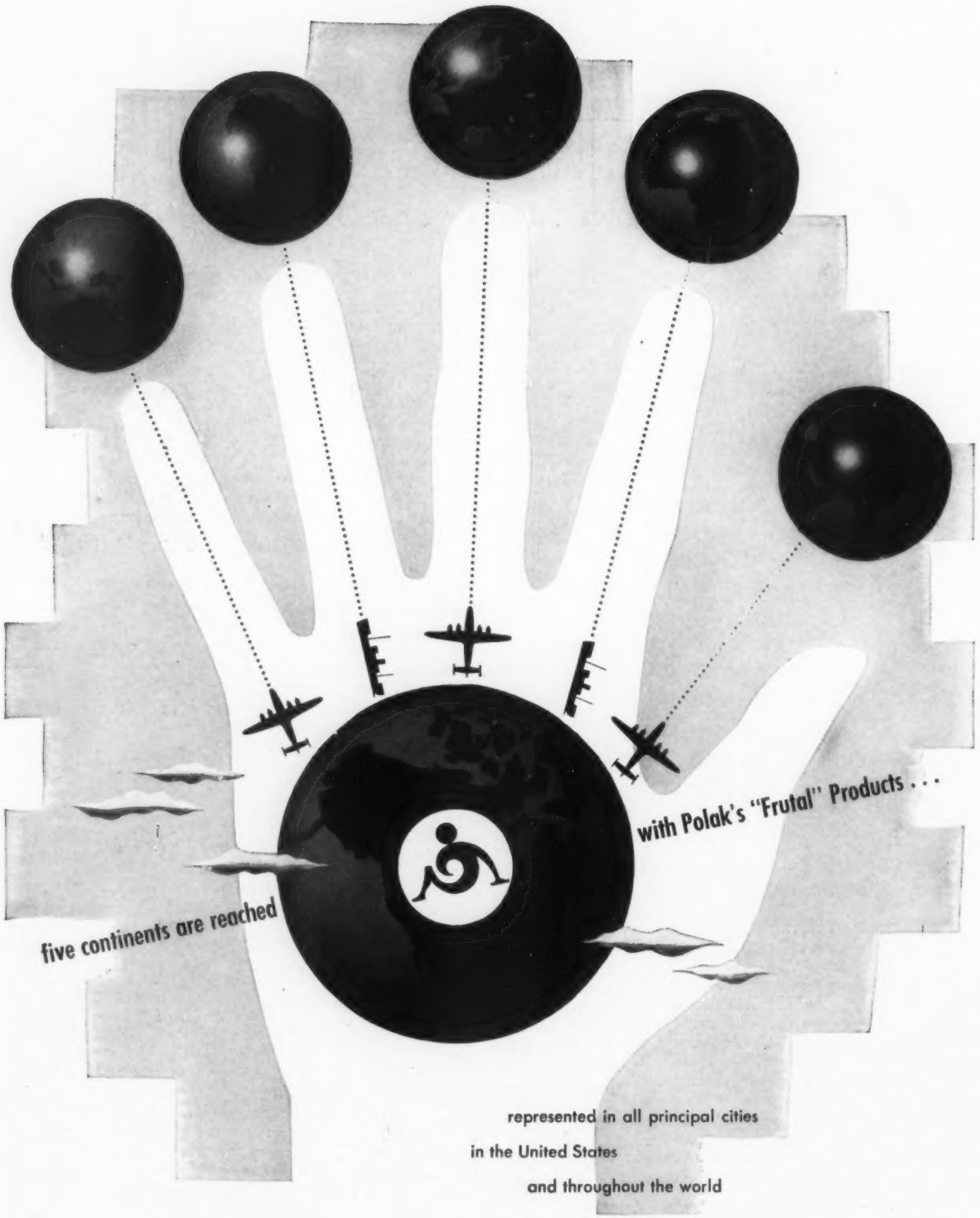
Q. Is it possible to separate the ground bark from a wave set prepared from Gum Karaya? If the answer is yes, what equipment would you suggest? *V.G.A. Chile*

A. We are not sure that the following suggestion will work, but, it is the only one we can think of. First be sure the gum is truly hydrolyzed and preferably with the use of a small amount of alkali you break down the lumpy character. Then pass mucilage through a centrifuge such as is used in separating cream from milk in the dairy industry. This should work. It has been used on other gum mucilages and it might work on karaya.

886: Papaya Creams

Q. We are planning on including some papaya creams in our present cosmetic line. Would you please send us all the details you have on hand for the manufacture of any and all types of papaya cream. *L.S.M. Florida.*

A. The subject of papaya in creams is a perennial one. Actually there is no regular literature on the subject, but a few articles have been written at various times in which the juice of the papaya plant has been suggested as an ingredient. As you know, the theory is that the enzyme papain is to have some nebulous type of benefit to the skin. There is a question whether the enzyme is still active under the conditions of manufacture. Certainly it would be useless in an alkaline media. The juice would have to be specially prepared and actually preserved, adjusted to the proper pH and then worked up into a cosmetic product with the required pH.



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Factors Affecting Jasmin Odour

How growth and production methods influence the odour of Jasmin . . . Daily and seasonal variations in growing flowers . . . Time to pick flowers . . . Products of producing areas compared.

G. J. HACKFORTH-JONES, M. A.*

JASMIN CONCRETE is produced at the present day in France, Italy, Egypt, East and West Africa, and in the Far East, but among all these the finest quality is produced only at Grasse, France near the Italian frontier. Great efforts have been made in other countries to obtain a product which will compare in quality with that of Grasse, but it now seems that in spite of the use of highly refined methods it will never be possible to produce even in Italy a jasmin comparable with that of Grasse.

During a six months' stay in Grasse the writer was enabled to smell jasmin flowers growing in the fields morning and evening, every day from June when the first flowers began to appear until December, when the petals were deep red at the tips and practically no odour remained. Thus he was able to observe the changes which took place due both to the time of day and to the progress of the year. During the crop period he was able to smell the flowers in the factories, and to feel them for signs of dangerous fermentation or a too great moisture content. A later visit to Calabria enabled a careful comparison of Italian methods to be made.

In the main, the difficulties in Italy and Grasse are similar—reluctance of the peasant to pick the flowers

* Yardley & Co., Ltd., London, England.

Jasmin fields. Robertet collection

In the morning the odour of the flowers is sweet and light, dominated by the note of benzyl acetate. In the early evening the odour is stronger and more indoloid in character. Around 2 a. m. the intense odour of indole dominates the whole section.

Photo courtesy Antoine Chiris

In July the odour of the growing flowers is relatively strong in benzyl acetate. In August a lovely combination is observed when the methyl anthanilate note is at its strongest and the combination of benzyl acetate and indole balance.

before 8 a.m., difficulty with agents whose job it is to bring only freshly picked flowers to the factory. From time to time agents bring flowers which were picked several hours before, and have fermented, or flowers which have been watered to increase their weight. The refusal of flowers, for any reason, endangers goodwill; their acceptance can only mean that the quality of the resulting concrete must suffer. On the face of it the difficulties in Italy should be less than in Grasse. The cost of labour is very much smaller and the jasmin plantations are usually very close to the factories so that the danger of fermentation in transit is reduced. But there are other difficulties which only a study of the odour can reveal.

Odour of Growing Flowers Changes

The odour of the flowers growing in the fields changes according to the time of day. In the morning the odour is sweet and light, dominated by the note of benzyl acetate. Before noon the flowers are picked and carried off to the factory and no further flowers open until just after sunset. When they do open—and they seem to open for no observable cause, very suddenly—the odour observed in the soft night air seems at once very much stronger and very much more indoloid in character. A drive down from Grasse to Cannes at about 8 p.m. on a hot still night in July is a most delightful experience, and the odour is then richer and sweeter than any which the process of extraction has been able to recapture, but the drive up again from Cannes to Grasse at 2 a.m. is not nearly so pleasant. The intense odour of indole dominates the whole coastal plain rolling in hot waves through the windows of the car. This is the most intense jasmin odour which can be encountered but it lacks the sweetness of the early evening or the light freshness of mid-morning.

When Flowers Should be Picked

It will be noted that since the odour of indole is apparent throughout the night the indole content of the flowers must be at its lowest soon after sunrise. Clearly this must be the moment to pick the flowers, and to treat them in order to obtain a concrete of the delightful fresh quality most admired in perfumery. Later in the morning the loss of benzyl acetate and methyl anthranilate increases the proportion of indole in the perfume remaining in the flower, and the treatment of flowers which are picked late in the day consequently produces a more indoloid and less beautiful concrete.

Seasonal Variations of Odour

Quite apart from these daily variations of odour which occur throughout the crop there are wide differences in the odour of the flowers as the year advances from Summer into Autumn. The crop begins in Grasse about the middle of July and at that time the odour is relatively very strong in benzyl acetate and although beautiful, lacks substance and body. In August, a lovely combination is observed where the methyl anthranilate note is at its strongest, and the content of benzyl acetate and of indole balance to produce a perfect equilibrium. In September the benzyl acetate quality has sharply decreased, and the indole is steadily increasing. In October the odour is all indole or even skatole, and it is the practice among the best producers

to separate the concrete produced after October 15th, from that of the previous three months. Production does not extend beyond the end of October unless demand is exceptional. The happy result of these climatic conditions in Grasse is that the concrete produced in July, when mixed with the concrete produced in September and early October, gives a product closely resembling that produced in August, "the heart of the crop." Thus, although the crop only lasts three months it consists entirely of the finest quality.

Five Months' Crop in Italy

In Italy a very different state of affairs is observed. Whereas in Grasse it is necessary each year to cut the jasmin bush right down to the root (just above the graft) it is only necessary in Italy to cut away the smaller branches, and it is not necessary to cover the plant entirely with soil to protect it from frost. Italian production is centered in Calabria and Sicily, where frost is altogether unknown. The warm Spring weather encourages the plant to commence its new growth very much earlier in the year, and the crop of flowers begins at the middle of June. Sheltered conditions and rich soil allow it to continue until mid-November, a total of five months' crop period against only three in Grasse.

But the odour suffers. Early Italian jasmin is as fragrant as that of Grasse, but under the hot sun the odour passes rapidly through the benzyl acetate stage to the methyl anthranilate stage, and by the end of July, has become substantially indoloid. Throughout August, September and October this indole character increases, and there is thus very little early concrete with which to balance the heavy pungent concrete produced in the Autumn. As always a communal has to be made of all except the final month's production, and it seems therefore that however much attention is paid to preventing the plant becoming exhausted by the use of the very best grades of fertiliser the average quality of Italian jasmin concrete can never equal that produced at Grasse.

The writer has not had the opportunity to visit other centers of production which have been mentioned above, but it seems clear from samples examined that similar influences are at work which prevent Egyptian and East or West African jasmin equaling the quality even of Italian concrete, and of course there are many technical considerations which cannot easily be brushed aside. Extreme purity of solvent is required if the odour is not to be harmed. An ordinary 60/80 petroleum ether fraction as supplied from the refinery does not approach the fine quality required for treating flowers. The solvent must be constantly re-distilled over purifying agents and at least 25% must be rejected. This in itself represents a large expense. In addition the losses due to evaporation are naturally greater in the hotter countries.

The use of a modern and above all a spotlessly clean plant also plays an important part. There is little evidence to show that tinned copper containers produce a poorer quality than stainless steel provided they are properly maintained, but if the tinning is carried out only every ten years or so and the containers and the grids which support the flowers have become black with age and dirt, then the quality suffers accordingly. It is also the practice of many primitive producers to cram as many flowers as possible into the container in order to economise in solvent. This has the unfortunate result of crushing the petals and allows a higher proportion of inodourous waxes to be released, with consequent dilution of the odour. In the final result a concrete is obtained reminiscent in odour both of petrol and of grade 3 ylang-ylang, and the primitive producer is discouraged from making further efforts which would enable him to produce a satisfactory, though always second grade product.

The Business of Awards

IT is a strange thing that Americans, who started their country off by making it illegal for citizens to have titles, except for modest titles of courtesy like "Mister," should be so impressed with awards, medals and synthetic designations.

Almost every product now seems to have won an award of some kind from some one; and the few products which have not had an accolade bestowed on them are apparently to be taken care of by newly formed organizations.

If it is difficult to fulfill the conception of a chicken in every pot and two cars in every garage, it is not going to be difficult at all to provide two medals for every product.

Of course, few of the givers of awards have the gumption to hand out awards which are baldly and clearly labeled "Best product in its class," or something equally understandable. The awards, instead, are for design, or style, or symbolism, or something else possibly but not necessarily related to the excellence of the product as a product.

The medals, ribbons, pins and citations which go with these awards are usually quite handsome, and make interesting illustrations for product ads. But a good many of them are so meaningless, and there are getting to be so many of them, that their value and influence as a merchandising aid is becoming open to serious question.

Furthermore, there has been a good deal of conversation about exactly how carefully and how thoughtfully many of these awards are developed; whether there is any careful standard of judging, and whether all products in a similar class are given equal consideration when awards are to be made.

Awards of merit, when based on merit and meticulous attention to the mechanics of determining the awards, are an integral part of the American scene. All awards, however, will lose meaning and value if there is an award for everyone, with its meaning not too clearly defined, and its capacity for promotional use not clearly circumscribed.—*Advertising Age.*

"Preferably, merchandise should be put into production only when it holds promise of giving more satisfaction to some consumers than they can obtain from other merchandise. In any case it should give as much satisfaction as some other merchandise. Merchandise that does not meet this requirement eventually disappears from the market. Advertising cannot save it."—*A. W. Frey.*

What Constitutes a Fine Perfume

What constitutes a fine perfume is strictly a matter of opinion, and this opinion is often influenced by education and environment. For example, the connoisseur of liqueurs prefers a mild, aged product, whereas a person with less judgment is apt to appreciate only those things which are spicey and "bite" the tongue. Figuratively speaking, the same is true with perfumes. However, a person is quite often influenced by clever sales promotion, appealing names, an attractive display, the opinion of friends, and psychological reasons. Apropos of the last, I know of tests carried out for a period of time by a concern using its own employees. The test consisted of applying a drop of perfume on each arm of an employee—previously, the arms had been washed with alcohol and dried. In most cases, when the same perfume (from the same bottle) had been applied to both arms they were thought to be entirely different odors. The reactions recorded were, at times, fantastic.

A frequent question concerning perfume is, "Does it last?" This quality definitely depends upon the type of product. For example, the lasting power of a perfume with a delicate, fine, definite, flower note will not be as great as that with an oriental or fancy bouquet note. Cheaper perfumes, because of their initial power, sometimes give the false impression that they are long lasting. This illusion is created because their sharp, strong, introductory notes often overwhelm the olfactory sense.

These facts should all be kept in mind when one is evaluating perfumes. Furthermore, it is important that our industry, through its Fragrance Foundation and nation wide publicity and training program, should teach the consumer the difference between perfume, cologne, and toilet water. The wrong kind of publicity will cause confusion and misunderstanding. For instance, the consumer often thinks that a cologne is a perfume. Actually, a classical cologne is a refreshing combination consisting mainly of citrus oils with some flower notes. In this country, some firms have introduced the confusion of cologne with toilet waters, so that today we have a group of perplexed consumers.

Perfumes can be divided into two groups. One will appeal to our conscious selves in terms of familiar things. These can be described whereas the other group will stir up many impressions, perhaps buried in our subconscious, and which are described only in indefinite terms.

The perfumes belonging to the first class are those which imitate nature while those belonging to the second class are the fancy bouquet or sophisticated type. The technique employed in making the latter sophisticated perfume is not to create an imitation of a natural fragrance but instead a composition that is suggestive of a floral or other bouquet. This second type of perfume can be shaded with all possible odor tones, many very far remote from floral effects—for example, the scent of the hayfields, the aroma of the fresh leaves, the pastry and other culinary fragrances, the odor of the mossy underbrush in the woods after rain. In this second class, the floral theme is always a combination of various flowers, and, in contrast, the background or bouquet is built on olfactory impressions far removed from the floral effect.

The art of perfumery can be compared with music. Here you have a variety of scales. In perfumes also, you have a somewhat similar variety of scales with the exception that you have a much greater number of notes. I conceive an accord in perfumery as a combination of various elements or notes that will possess the same uniformity and harmony as an accord in musical art.

It has taken the perfumer a good many years of painstaking efforts to assemble all the materials that he can harmoniously blend together. Anybody can strike a note or various notes on the piano, but few, unless well trained, can play a full harmony. The same applies to perfumery. The difference between music and perfumery lies in the fact that the score of a musical masterpiece is regularly published whereas the composition of a great symphony in the perfumery art is a carefully guarded secret. It takes a whole lifetime for a perfumer to write his own score of harmonious combinations.

The purpose of perfumery is exactly the same as that of music or other arts. A good perfume will evoke a certain mood, will bring back past memories of things seen, smelt, or experienced. It will exalt certain feelings or create certain longings just as a symphony will awaken in your soul the great ecstasies of living. In short, all the arts (visual, musical, or fragrant) stir up in the innermost part of your being the greatest attributes of the soul.

A woman adorned with perfume is glamorized, even more than by beautiful furs or ornaments because perfume becomes a part of her and enhances her beauty and charm. Perfume has a tremendous appeal; it sanctifies the eternal bond of man to woman and surrounds her in a halo of ethereal beauty.

The perfumer does not create for himself; his compositions are designed to gratify the human sense. This sense is often affected by the dictates of Fashion. For example, the present trend in free flowing dress brings with it the untrammeled outdoorsy type of fragrance. The perfumer, to be in tune with fashion, must work closely with his Presentation or Fashion Department. Before a new product is put on the market, all the necessary tests, including so-called consumer tests, should be completed. For instance, we must be sure that the lasting qualities and other typical characteristics are adequate.—*Herbert Sommer in lecture at New York University.*

Young Presidents' Objectives

HAROLD ALTSHUL, 41, president of Ketuchum & Co., has established a three point objective of the Young Presidents' Organization, made up of chief executives of large organizations who attained their positions before reaching the age of 39.

The objectives of the organization are:

"Preserve the supreme status of the individual citizen;

"Recognize that his (the individual's) labors and only his labors can create personal and national security and a higher standard of living;

"Acknowledge that the individual will not labor and produce to the fullest extent unless protected in his personal rights, liberties and incentives."

How to Produce Good Top Notes

Practical suggestions on the use of powerful and often unusual oils or chemicals or of compounds comprising such combinations to create an attractive top note to make perfumes more saleable.

RICHARD A. FRASCATI *

PICTURE a perfume counter in any store. A customer approaches and asks the salesgirl to help with the choice of a perfume. What is the very *first* thing the customer does? Right! The customer sniffs the perfume *right out of the bottle*. And that is where top-note perfumery pays off.

How often have you smelled a perfume and said, "That's pretty good, but not finished enough"? When this happens, usually not enough attention has been paid to the top-notes of the perfume. It is relatively easy to build a nice corps or body. This is readily done by using essential oils, aromatic chemicals and compounds in such a way as to produce certain definite effects. Having attained a nice corps, a lasting one, too, and a nice "dry-out", we still lack distinctive top-notes that make the perfume sell.

Producing Top Notes That Sell

How does one go about producing these top-notes that sell? That question is easier to pose than to answer. There is no short cut to top-note perfumery—no substitute for work, trial, error and more work. Various oils, chemicals and compounds must be tried to obtain the desired effect. Use them subtly, however, to see if a slight touch of this one or that one really makes a perceptible change for the better in the perfume and is worthwhile from a cost standpoint. Many compounds, specially designed to round off a perfume, have tremendous effect on the top-notes, too.

Now, to be of any real value, an article such as this must necessarily cover some specific examples of essential oils, and other ingredients that may be used in top-note perfumery.

So that we may more readily find a common basis for building an odor, we can agree to divide a perfume into three constituent parts; top-notes, body or corps and dry-out. The terms are self-explanatory and may be likened to the three essential parts of a letter: its opening, body and conclusion. We are here concerned with the opening theme of a perfume for we want it to sell when the customer sniffs it out of the bottle. Few people realize that all a perfume may have on its dry-out is vanillin, coumarin or some synthetic musks, for *they buy out of the bottle!*

Composition of Corps and Top Notes

A review of some of our high-grade perfume formulas reveals that our corps often are composed of only 10-12 ingredients but that on the average 28-35 materials are necessary to make the "complete" perfume. Can you see the amount of care that goes into top-note perfumery? The top-notes may represent only 10% or less of the total by weight, but may well represent more than half the number of ingredients.

Many very expensive oils are used in top-note perfumery. "Why?" Not just because they are expensive for we do not simply wish to add cost to the perfume. Rather because they really become reasonable since they are used in minute quantitites. Remember, top-note perfumery is an art that helps do one thing more than anything else—to sell your perfume or fragrance product at the point of sale—certainly a desirable attribute.

We do not wish to convey the impression either, that top-note perfumery only calls for expensive oils. That would give an entirely false picture. Top-notes, good ones, may be produced by various oils running the gamut from fairly cheap ones to the relatively expensive ones. And as we said before, many reasonably-priced compounds have been made to help perform this function, too.

Now specifically, how does one go about producing a good top-note? First, he must intelligently classify the perfume that he is making. Is it a straight floral, imitating one of the well-known flower scents? Is it a floral bouquet, giving a general floral impression but defying exact description? Maybe an aldehydic floral? Or perhaps an oak moss type—an oriental or aldehydic oriental? Having the answer to this question is the first step in helping the perfumer decide in which direction he should experiment with top-notes.

Now, that he has an idea of the classification of the perfume, he can match that classification with the type or types of top-notes that would best fit within that same classification. Here, imagination plays a great part. Most perfumes or bouquets are fantasies of odor.

* Perfumer and chemist, Perfumery Associates Inc.

We paint an impression just as an artist does on canvas. Often it is the unusual, rather than the conventional, top-note that pays off in actual sales.

Readily Usable Oils

Some of the more readily usable oils for us in top-note perfumery are those that might be described, for want of a better term, as herbal oils. These include the mint oils, marjoram, dill, basi, chamomile, rosemary, origanum, bay, thyme, sage, cumin, estragon, and anise. Of these the most useful will probably be basil, sage, the mints, chamonile and traces of cumin.

Then come the spice oils: Ginger, clove, nutmeg and the most useful of all—cinnamon bark. But the value of this group is limited in top-note perfumery since most of these oils are more necessary to the corps or body of the perfume.

Next, the seed oils: carrot seed, cumin seed, cardamon, caraway, celery, and coriander. All are extremely useful in top-note perfumery. While such oils as cardamon and chamomile may be more expensive than many of the more commonly used oils, we find that they may produce novel and interesting effects when used in very small amounts in certain perfumes. For instance, when floral bouquets are heavily based upon ionones and wood notes, in addition to their floral characteristics, chamomile dosed in by the use of a ten per cent solution often helps furnish the perfume with a new and highly desirable top-note that makes it immediately distinctive.

Certain root oils such as extremely small quantities of costus and angelica root oils are good ones to have available on your shelf.

Another group of oils for top-note perfumery is that of the terpeneless citrus oils. We find terpeneless orange and lemon oils of primary value with the terpeneless oils of lime and bergamot secondary in importance. It would be worth while sometime to try terpeneless oil of lemon instead of citral and terpeneless oil of orange instead of Aldehyde C-10. The contribution these oils make to the smoothness and finish of the entire perfume, as well as its top-notes, would more than pay for the higher cost.

A too little known group of oils is that of the distilled oils from resins. Here we have the oils of galbanum, labdanum, myrrh, olibanum, opoponax, peru, styrax and tolu. We find, however, that their use is limited by the knowledge that perfumers have of their individual worth, a lack of appreciation of their true usefulness. Some perfumers use large quantities of the most powerful of the above mentioned oils. Others use almost none at all. We all recognize the value of the resins from which these oils are made, but we usually use them as part of our corps or dry-out. When it is desirable (as it often may be) to have our top-note smelling of one of these, the use of the distilled oil rather than the resin itself is indicated.

A Useful Combination

One of the most useful tricks in perfumery is to use a combination of the resin and the distilled oil produced from the same resin. This gives an effect that is very hard to duplicate and in many instances is much more desirable than that attained by using either the resin alone or the distilled oil alone. Analogous results are obtained by employing a combination of citrus oils and their terpeneless counterparts. Remember, that a resin will hold its note even into the dry-out stage, but very often such an effect is not what you want. You may desire a green top-note that later disappears. In this case, the use of an oil such as galbanum is indicated. Once again, the perfumer must be careful to use this oil delicately, for it is extremely powerful and may screen out other desirable characteristics. We recommmend using the oil of galbanum as you would your aldehydes, in one or ten per cent solutions.

Whether she buys her toiletries in a store or from a door to door saleswoman the customer judges the odor by sniffing the bottle.

Oils of Peru and Tolu have some drawbacks to easy use. Both of these oils contain solids that crystallize out on standing and therefore must be gently heated before using. However, some of the chemicals naturally contained in these oils are highly desirable. For instance, natural farnesol, a most useful chemical blender, is contained in oil of Tolu. Peru oil is reasonably priced enough to be used (oft-times with oil or resin opoponax) for soap perfumery. This gives a sweetening effect in soap that is unobtainable excepting through the use of chemicals which may cause discoloration.

The author has found touches of otto of rose economical for use in top-notes, as well as lavender and geranium oils. Some of the absolutes, normally found in the corps of some perfumes, also contribute to the top-notes. We mention the absolutes of immortelle, jonquil, ylang, mimosa, orange flower, or violet leaves.

Other useful products for top-note perfumery are the aromatic chemicals. We know about the wide use of aldehydes and compounds containing aldehydes for this purpose. But many aldehydes are neglected by per-

fumers, since, when using them, the dosage is often too big and causes a harsh effect. The use of methynonyl acetaldehyde is a case in point. Its use must be on the side of too-little rather than too-much. It should used just below the threshold of ready perception.

Many aldehydes, other than the straight aliphatic series ones, are employed in top-note perfumery. A few that come quickly to mind are: cyclamen aldehyde, phenylacetaldehyde, hydrotropic aldehyde, phenyl propyl aldehyde, citral and anisic aldehyde.

Some chemicals generally useful for their lasting qualities or as part of the dry-out should not be overlooked for their effect upon the inital top-notes. These include such materials as so-called aldehydes C-14, C-16 and C-18. These will last, true enough, but will be readily discernible in the top-notes, too.

Fruity Esters

We must mention the use of what are commonly referred to as the "fruity" esters. Esters of ethyl, butyl, iso butyl, hexyl, heptyl and octyl alcohols. Certain floral bouquets may have their interesting top-notes enhanced by the addition of small amounts of such esters as ethyl acetate, octyl formate, etc. We point out that these notes do not generally last, but may fade rapidly. Allyl esters may be used to achieve pineapple effects that fade later. Octyl esters are useful to attain orris or fatty effects that are not persistent.

Some of the more commonly used chemicals for top-notes include, of course, the aldehydes, viz.: heptyl, octyl, nonyl, decyl, undecyl, undecylenic, in addition to the previously mentioned methyl nonyl acetaldehyde. Then there are chemicals used for specific effects such as methyl heptine carbonate for powerful violet characteristics, para-cresyl acetate so useful in jasmins, gardenias, tuberoses, and the like; touches of indol and skatol to help achieve the odors of break-down products naturally occurring in essential oils.

The range of aromatic chemicals useful for top-notes is much too wide to be adequately handled in this article. As we stated before, and will state again, no substitute for work and experimentation will be found easily.

To sum up, we find the most useful ingredients for top-note perfumery to be: otto rose, clary, sage, lavender, terpeneless citrus oils, distilled oils from resins (particularly galbanum and labdanum), peppermint, basil, cumin, cinnamon, coriander, caraway and chamomile. Among the chemicals we include, the aliphatic aldehydes, the so-called peach, strawberry and coconut aldehydes, cyclamen aldehyde, phenylacetaldehyde, citral and anisic aldehyde. Many others will come to mind in the course of experimentation, but you will agree that these are the most useful.

Top-note perfumery is indeed a neglected art, but one well worth cultivating for "top-notes" are to perfumes what "grace" notes are to musical compositions. They lend color and appeal. Their use is just as important in making cosmetic and soap perfumes as in making extracts and toilet waters. The subtle use of powerful and oft-times unusual oils or chemicals, or of compounds comprising such combinations, cannot help but make more salable products.

Work for an attractive top-note—the one that introduces the perfume to your customer and you will find that top-note perfumery pays off!

The Average Male

TAKING an average employed American at the time when he is just about getting well started up the economic ladder at the age of 29—a Chicago research firm finds this about him.

He has an annual income of $4,300, is married and has two children, a car, a mortgage on his home, smokes a pack of cigarets a day and drinks a quart of liquor a month—it doesn't say how many guests he has in his home. Within the next 36 years—that brings him to retirement age of 65—he will buy the average number of household appliances and will present to his wife two fur coats within that period. We presume this latter item may be of especial interest to our readers on the distaff side who have 29-year-old husbands!

But—and this should be of importance to both husband and wife—during this 36-year period, Mr. Average American will pay no less than $34,700 in taxes. Here is his bill:

Federal income, $15,684; real property, $7,200; Social Security, $3,573; personal property, $720; gasoline, $842; licenses, $738; excise, $715; lubricants, $28; sales or state income, $2,035; cigarets, $1,117; liquor, $972; luxury, $342; telephone, $267; transportation, $246; admissions, $187; and home appliances, $75.

That adds up to around 22 per cent of his future earnings. But it does not include many hidden or processing taxes. Nor does it include the possibility—even the probability—that taxes may go still higher.

Anyhow, just think what a nice home you could buy with that $34,700. Or how many nice vacation trips you could take. Or what a nice nest-egg for the children when they get married. Or how handy it would come in for retirement. But it isn't yours—it belongs to the tax-collector!

However, before you get bitter about it all, pause to consider this: You live in the best country, with the highest standard of living, in all the world—and even after you will have paid all your taxes, you'll still be far better off than the citizen of any other country.—*The Item.*

Credit

CREDIT cannot be labeled a one-time transaction. It is the promotion of additional and repeat sales that offers the ever-present opportunity and the attraction of new customers through favorable treatment and recommendation. Every account should be looked upon as an opportunity to service that particular customer over a period of years. If we consider consumer credit in that light, we can afford to spend a little more time, money and effort in evaluating the risk.

More problems have been created by the foolish extension of credit than by any other cause. The credit grantor creates more ill-will by a reckless credit policy than he does by a more moderate one. A conservative policy does not mean a tight policy. We must never lose sight of the fact that additional business is always available from promptly paid accounts.—*Clarence Wolfinger.*

"The true test of our civilization is in the way we treat our old people."—*Lloyd George.*

How 15 Cities Select Toiletries

Toilet goods market probed by 1951 Consolidated Consumer Analysis. . . . Discloses wide variations in product usage and brand preferences. . . . Open markets indicated.

LEENDERT DRUKKER

LOCAL marketing of certain common cosmetic products may not have reached the saturation point, the 1951 Consolidated Consumer Analysis indicates. For example, cream shampoos were used by 52.5% of the responding families in Salt Lake City, but in only 29% of those in Birmingham and 29.5% in Seattle. More than twice as many families appear to purchase toothpowders in Sacramento than in Birmingham. And whereas liquid hand lotion was to be found in 86.1% of the responding families in Birmingham, only 62.2% used such products in Milwaukee.

The report consists of consolidated surveys conducted by local newspapers in fifteen cities, namely Seattle, Spokane, San Jose, Sacramento, Modesto, Fresno, Salt Lake City, Omaha, Duluth, St. Paul, Milwaukee, Indianapolis, Columbus, Birmingham, and Washington, D. C.

The survey indicated considerable difference in cosmetic buying habits of the public in different cities. In Modesto, for example, over one-third of the responding families preferred to buy their toiletries in variety and grocery stores, compared with 10.8% in Milwaukee. These preferences appear to have no relation to the size of the city.

Percentages of preferences for the various cosmetic outlets are given in the following table.

Toiletries, Place of Purchase	Independent Drug Stores	Chain Drug Stores	Department Stores	5 & 10c Stores	House to House Salesperson	Grocery Stores	Beauty Shops
Milwaukee	22.4	11.2	50.7	9.4	4.7	1.4	.2
St. Paul	16.0	26.0	48.0	6.2	10.8	2.3	.7
Duluth-Superior	18.4	19.7	38.1	11.8	9.1	3.1	
Columbus	21.8	22.0	30.4	9.8	10.9	4.5	
Birmingham	15.2	8.4	36.4	20.3	17.8	2.5	
Fresno	30.4	21.9	13.6	11.1	13.6	7.1	2.1
Modesto	32.0	17.7	1.3	21.7	10.9	12.5	3.9
Sacramento	24.2	15.9	24.3	9.9	9.4	9.1	6.7

In certain lines, a manufacturer may have attained a position of singular brand preference. Lustre Creme, for example was the first cream shampoo brand preference in 13 cities, Halo, the favorite liquid shampoo in 14 cities, Colgate tooth paste headed the list in all fifteen cities, Pond's facial cream was tops in 13 cities, Jergen's hand lotion and Toni's permanent wave kit were the favorites in all fifteen cities.

Brand preferences of responding families are shown in the following tables.

Brand Preferences (numbers in parentheses refer to the number of cities in which that brand was given top preference; brands are listed in running order of popularity. Not every product was surveyed in every city.)

Toilet Soaps, Hand and Face

Lux (10), Ivory (3), Sweetheart (1), Camay (1), Palmolive (1), Woodbury, Dial, Cashmere Bouquet, Lifebuoy, Wrisley.

Toilet Soap, Bath

Lux (7), Ivory (3), Sweetheart (1), Palmolive (2), Dial (1), Camay (1), Lifebuoy, Woodbury, Cashmere Bouquet, Swan, Wrisley.

Cream Shampoo

Lustre Creme (13), Toni (1), Prell (1), Shasta, Rayve, Formula 20, Helene Curtis, Vita Fluff, Studio Girl, Avon, Velvet Touch (Jewel Tea), Modart, Richard Hudnut, Wildroot.

Liquid Shampoo

Halo (14), Drene, Fitch, Wildroot, Woodbury, Breck (1), Richard Hudnut, Watkin's Mulsified Coconut Oil, Conti Castile, Kreml, Stanley, Avon, Formula '42'.

Facial Cream

Pond's (13), Lady Esther, Woodbury, Max Factor, Avon (1), Dorothy Gray, Coty, Richard Hudnut (Du Barry), Harriet Hubbard Ayer, Noxzema, Jergens, Helena Rubinstein, Elmo, Beauty Counselor, Tussy, Merle Norman, Elizabeth Arden, Studio Girl, Colonial Dames.

Liquid Hand Lotion

Jergens (15), Campana Balm, Hinds,' Trushay, Tussy, Cashmere Bouquet, Revlon, Avon, Chamberlain, Dorothy Gray, Pacquin (Silk 'n' Satin), Woodbury, Balm Argenta, Yardley.

Deodorant, Women

Mum (6), Arrid (8), Stopette, Fresh, Veto, Avon (1), Odo-Ro-No, Tussy, Etiquet, Five-da-Pads, Yodora, Heed, Ever-Dry, Dorothy Gray.

(Continued on page 36)

Glycerine in Modern Dentifrices

How it is used in various types of dentifrices . . .

Desirable properties it imparts to its formulations

makes it a difficult ingredient to decrease or to replace.

ROBERT A. STETSON*

GLYCERINE, one of the essential raw materials of dentifrice manufacture, is an important ingredient in the great majority of tooth pastes, dental creams and liquid dentifrices on the American market. Millions of pounds of this clear, heavy fluid are used for these products each year.

Accepted Products

Probably the best index of the status of glycerine in dentifrices was provided in the lists of "accepted" products published by the American Dental Association in 1947. Although these reports on the so-called cleansing or cosmetic preparations were discontinued in 1947, the published lists showed that, with the obvious exception of tooth powders, most of these high-rating preparations contained substantial proportions of glycerine or glycerite of starch.

Safety and Efficacy

The safety and efficacy of glycerine are well known and are the principal reasons for its wide use, not only in dentifrices and mouth washes, but also in dental therapeutic and prosthetic preparations. It has a firmly established reputation for freedom from harmful effects to the teeth and oral mucosa. When the glycerine content of one popular tooth paste was reduced several years ago, reports of irritation to the oral mucosa came from many parts of the country. This, of course, had occurred during the period when considerable quantities of glycerine had been diverted to war needs.

In addition to attempts to use less glycerine when it is scarce, some dentifrice producers have tried various glycerine substitutes. Their opinion of the value of such materials was evidenced by the speed with which they returned to their original formulas once glycerine was removed from allocation restrictions. Examination of tooth pastes at the laboratories of the Glycerine Producers' Association showed that 12 out of 13 leading brands had returned promptly to the use of glycerine.

Glycerine is used when scientists wish to test dental abrasives or compare the relative abrasiveness of different products. In such procedures the product under investigation, if a paste or powder, is mixed with enough 50 per cent glycerine in water to bring it to the requisite consistency, so that it would flow readily over the surface of the tooth during the brushing procedure.

Useful Properties for Dentifrices

Having a sweet warm taste, glycerine naturally contributes to the flavor and acceptability of a dentifrice. More important, however, are the physical characteristics, such as its hygroscopicity and plasticizing action, which make glycerine so necessary in the formulation of tooth pastes. As remarked by Strausz,[1] a European authority, a major role played by glycerine in tooth paste is in the prevention of hardening of the paste during prolonged storage periods. According to deNavarre, in his Text, "Chemistry and Manufacture of Cosmetics," this anti-hardening effect can be illustrated in a quick and interesting way by accurately weighing out two 5 Gm. samples of light precipitated chalk. These are made into pastes by mixing one with 5 cc. of glycerine and the other with 5 cc. of water. The aqueous mixture becomes hard at once, while the glycerine mixture remains soft and paste-like in consistency.

This worker also describes glycerine as "one of the best all around excipient binders" for tooth pastes, and may be used in "any required amounts." Vallance[2] notes that no other group of raw materials is more important than the binders and excipients. He states that glycerine is an essential constituent of most tooth pastes, usually in proportions ranging from 10 to 40 per cent. In a given formula, says this expert, it is often impossible to cut down the glycerine content and yet achieve as good results.

Glycerine's efficient massing action, as well as its plasticizing effects, have proved very useful with a wide variety of binding agents. Among them are such mate-

* Glycerine Producers Assn.

Filling tooth paste in hygienic, convenient collapsible tubes.

rials as starch; vegetable gums like tragacanth, karaya, and acacia; pectin; various cellulose derivatives; and several newer substances. Glycerite of starch, one of the binders most commonly used in tooth paste manufacture, may be made according to any one of several formulas. The following procedure is given by deNavarre:[3]

Starch	10 parts
Water	20 parts
Glycerine	70 parts

Make a homogeneous paste of the starch and water and slowly add to the glycerine. Mix well and heat to 150°C, with constant stirring. When a transluscent mass forms, discontinue heating and store in tight containers.

In addition to the excipient, all the cleaning or cosmetic tooth pastes, as distinguished from therapeutic pastes, contain an abrasive. In addition, many of these contain soap or detergent. The presence or absence of such cleansing aids is sometimes used as a means of broadly classifying tooth pastes into two groups, such as the foaming and nonfoaming types. A number of popular brands fall into the first category, where soap serves not only as a binder, but also acts to produce foam during brushing and to facilitate the rinsing away of the paste mass.

Average Formula for a Tooth Paste

Clement[4] observes that the average formula for a tooth paste centers around the following main ingredients:

Glycerine	30-40 per cent
Water	5-15 per cent
Precipitated chalk	10-15 per cent
Soap	5 per cent
Methyl salicylate	3-5 per cent

Of course, many other ingredients, including various flavoring combinations, find employment in tooth paste formulations. Obviously, it is the use of these materials that accounts for the variations in the large number of formulas that can be adapted to meet different tastes, requirements, or cost levels. Thus a properly balanced formula for making a tooth paste of the correct consistency and with other desirable characteristics may call for the use of:

Precipitated chalk	80.0 parts
Powdered neutral white soap	15.0 parts
Glycerine	41.0 parts
Water	37.0 parts
Calcium chloride	1.5 parts
Soluble saccharin	0.2 part
Gum tragacanth	2.0 parts
Flavor	2.0 parts

Mix the glycerine and tragacanth. Dissolve the calcium chloride in the water and add to the previous mixture. Agitate and let stand until the gum is thoroughly hydrated; this takes 20 minutes or more. Mix the remaining dry ingredients and pass through a 40 or 60 mesh sieve. Add this mixture and the flavor to the prepared liquid portion and mix until a smooth paste is formed.

In addition to the more familiar vegetable gums, the alginates, which are derived from a species of seaweed, have come in for increasing attention as binders for tooth pastes. Sodium alginate, for example, is employed in the following formula:

Sodium alginate	0.3 - 1.0 part
Glycerine	25.0 parts
Water	25.0 parts
Saccharin	0.1 part
Parahydroxybenzoic acid ester	0.1 part
Precipitated chalk	40.0 -50.0 parts
Calcium citrate	0.375- 0.1 part
Soap	4.0 - 8.0 parts
Flavor	sufficient

Dissolve the alginate in the water, to which the preservative is added, and then incorporate the saccharin and glycerine. Mix in the chalk and then add the calcium citrate, previously dissolved in water. This mixture has a somewhat dry appearance until the soap is added, after which it becomes pasty. The amount of soap incorporated governs the consistency.

Although bentonite has been mentioned as a tooth paste binder, there have been objections to its use. The disadvantages inherent in bentonite, however, seem to have been overcome in a complex colloidal magnesium aluminum silicate available commercially.[5] According to the manufacturer, it can be used to make a smooth, stable, well balanced, glycerine-containing tooth paste, as follows:

Colloidal magnesium aluminum silicate	1.50 per cent
Water	24.92 per cent
Precipitated calcium carbonate U.S.P.	43.85 per cent
Tragacanth, powdered	1.00 per cent
Saccharin, soluble	0.18 per cent
Sodium benzoate	1.00 per cent
Glycerine	19.80 per cent
Neutral white soap	5.00 per cent
Flavor	1.80 per cent
Light mineral oil	0.20 per cent
Calcium sulfate dihydrate	0.75 per cent

Slowly add the colloidal magnesium aluminum silicate to the water, agitating continually until smooth, and add half the calcium carbonate. Add the tragacanth, saccharin and benzoate to the glycerine. Mix well on a pony mixer and while mixing add the previous combination. When homogeneous add the soap and the flavor dissolved in the oil. Continue mixing until uniform and then incorporate the rest of the calcium carbonate and then the calcium sulfate; mix well and finally pass through an ointment, roller or colloid mill.

The inclusion of special materials is, of course, a common procedure in tooth paste manufacture. A familiar product of this sort is a milk of magnesia tooth paste which uses both glycerine and glycerite of starch.

Use of Synthetic Detergents

Of course, synthetic detergents have come into the tooth paste formulation picture. Glycerine has proved its value in conjunction with such materials, including patented detergents that are particularly suitable for use in dentifrices. Such a preparation is this frequently cited formula which utilizes glycerine-plasticized methyl cellulose as the binder:

[5] R. T. Vanderbilt Co. (Veegum)

Compounding a dental cream with glycerine to keep it fresh.

Methyl cellulose (400 cps.)	10.0 parts
Distilled water	400.0 parts
Glycerine	50.0 parts
Precipitated calcium carbonate .	450.0 parts
Flavoring oils	9.0 parts
Sodium lauryl sulfate, U.S.P. ...	30.0 parts
Preservative (methyl or ethyl parahydroxybenzoate)	1.0 part

Dissolve the preservative in 150 parts of boiling water and pour over the methyl cellulose. Continue stirring while mass swells, softens and cools. Gradually incorporate the rest of the water, at room temperature, and then add the glycerine and follow with the carbonate and then the detergent. Pass through a mill and add the flavoring, which may be oil of peppermint, spearmint or methyl salicylate.

In 1948, Musher[5] obtained a patent on a special oat fraction which provided superior binding and stabilizing effects. In tooth pastes, this not only serves as a good binder, but also contributes foaming characteristics, thus obviating the need for soap or similar material. Such a tooth paste, is prepared with glycerine and glycerite of starch as important components.

The "therapeutic" types of tooth paste contain special ingredients which are intended to reduce caries formation, or to combat some existing condition. In the former class belong the ammoniated dentifrices which have attracted so much attention during recent years. Without going into any discussion as to the value of such preparations, it may be said that considerable secrecy has surrounded their formulation. Some information is available, and this shows that glycerine is, as usual, a valuable component. This is evident in the tentative formula provided by L. A. Kramer of the Victor Chemical Works in Chicago. Based on the diammonium phosphate-urea (carbamide) combination used by the research group at the University of Illinois Foundation, this experimental formula calls for:

Tricalcium phosphate	26.67 per cent
Glycerine	45.40 per cent
Water	15.40 per cent
Flavoring (peppermint oil) ..	0.58 per cent
Gum tragacanth	0.96 per cent
Saccharin	0.10 per cent
Synthetic detergent[b]	2.89 per cent
Diammonium phosphate, powd. FF	5.00 per cent
Urea, 100-mesh	3.00 per cent

Allow the gum to swell in the water for 30 minutes, add the glycerine and mix well. Slowly add the tricalcium phosphate and mix thoroughly. Incorporate the other ingredients in the following order: Saccharin, flavor, diammonium phosphate, urea, detergent. After the last addition, mix no longer than is necessary to obtain complete distribution.

According to a report of the Council on Dental Therapeutics, Amion tooth paste, another product of the ammonia-releasing class, is said to be based on synthetic urea and jack bean meal and to contain a substantial proportion of glycerine. Dicalcium and tricalcium phosphate are the polishing agents.

Where an antiseptic tooth paste is desired, the need can be met with a modern product containing an antibacterial quaternary ammonium compound.

Other ingredients may be used in tooth pastes to impart certain desirable properties. For example, Rossi[6] speaks highly of the scale-removing qualities of sodium sulforicinoleate in dentifrices. Among the several formulas given in his discussion is one containing:

Glycerite of starch	50.0 parts
Sodium sulforicinoleate	10.0 parts
Kaolin	40.0 parts
Flavor, color and water	sufficient

Blass[7] has recommended the following liquid dentifrice in cases of tooth brush abrasion; where special protection of tooth surfaces against acid attack is desired; or in cases of great susceptibility to dental caries:

Sodium oleate	6.0 per cent
Saccharin	0.2 per cent
Oil of cloves	1.0 per cent
Oil of cassia	0.5 per cent
Oil of peppermint	0.5 per cent
Alcohol	50.0 per cent
Glycerine	25.0 per cent
Water, to make	100.0 per cent

To use this liquid dentifrice, 10 drops in full strength are employed on a dry brush.

It is evident from the foregoing that of all the ingredients that can be used in making any of the various types of modern dentifrices, glycerine is the one most generally common to them all. In addition, the combination of desirable properties which it imparts to its formulations makes it the most difficult ingredient to decrease or replace.

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[b] National Aniline Division. (Nacconol LAL)

(Continued from page 32)

Hand Cream

Pacquin's (11), Jergens, Avon (4), Pond's, Sofskin, Perfection, Noxzema, Hinds, Lady Esther, Woodbury, Balm Barr, Tussy, Harriet Hubbard Ayer, Revlon, Athene, Colonial Dames.

Permanent Wave Kits

Toni (15), Richard Hudnut, Lilt, Rayve, Nutri-Tonic, Bobby, Pin-Wae.

Permanent Wave Kits Refills

Toni (14), Richard Hudnut, Lilt Rayve, Nutri-Tonic.

Nail Polish

Cutex (3), Revlon (12), Dura-Gloss, Helen Neushaefer, Avon, Chen Yu, La Cross Naylon, Cameo.

Tooth Paste

Colgate (15), Pepsodent, Ipana, Craig-Martin, Ammident, Listerine, Amurol, Phillips' Milk of Magnesia, Kolynos, Iodent, Avon, Lyon's, Squibb.

Tooth Powder

Colgate (10), Dr. Lyon (4), Pepsodent (1), Amurol, Ammident, Pycopay, Revelation, Calox, Avon, Caroid, Stanley.

Products for Fine Fabrics

Lux Flakes (12), Ivory Flakes (2), Ivory Snow, Ivory Bar, Ivory, unspecified (1), Dreft (1), Chiffon Flakes, Vel, Tide, Surf, Fab, Joy, Trend, Duz, Rinso, Lan-O-Sheen, Oxydol, White King.

Products for Dishes

Joy (1), Dreft (1), Tide (12), Vel, Ivory Flakes, Ivory Snow, Ivory Bar (1), Ivory unspec., Surf, Duz, Fab, Lux Flakes, Rinso, Oxidol, Trend, Swan Bar, Glim, White King.

Of the following products, shaving cream was covered in six markets, hair tonic in eight, and lipstick and face powder in five markets.

Shaving Cream (regular and brushless)

Palmolive, Williams and Glider (Brushless), Mennen, Colgate, Lifebuoy, Gillette, Old Spice, Yardley, Po-Do, Ingram, Avon, Burma Shave, Barbasol, Molle, Krank, Noxzema, Koolox, Prep, Seaforth, Rise, Excel-Cis, Woodbury.

Hair Tonic or Dressing (Men)

Vaseline, Wildroot, Vitalis, Fitch, Lucky Tiger, Kreml, Avon, Mennen, Suave, Jeris, Rose Oil, H Q Z, 42 Oil.

Lipstick

Avon, Revlon, Max Factor, Coty, Ponds, Dorothy Gray, Helena Rubinstein, Tangee, Elizabeth Arden, Tabu, Du Barry, Evening in Paris, House of Stuart, Debutante (Fuller).

Face Powder

Coty, Avon, Lady Esther, Max Factor, Ponds, Woodbury, Helena Rubinstein, Elizabeth Arden, Harriet Hubbard Ayer, Du Barry, Dorothy Gray, Evening in Paris, Revlon, Debutante (Fuller).

While these surveys should not be relied upon for positive proof, certain conclusions might be drawn from these figures. Where the product is more of a luxury nature, there appears to be more likelihood that a single manufacturer will capture the lion-share of the business, at least within a single community. In another community, another brand may be the runaway leader. When product is more of an everyday, utilitarian character, such as soap, there may be closer competition of leading brands within a single community.

In different communities, the public prefers to purchase its cosmetics in a different type of outlet. This may imply an undeveloped system of distribution, or it may be due to the local economy, main industry, size, or location of the town. Apparently there remain plenty of lucrative possibilities in different distribution methods, and a more vigorous promotion of certain products in certain communities.

	Toilet Soap, Hand & Face	Toilet Soap, Bath	Cream Shampoo	Liquid Shampoo	Facial Cream	Liquid Hand Lotion	Deodorant, Women	Hand Cream	Permanent Wave Kits	Permanent Wave Kits Refills	Nail Polish	Tooth Paste	Tooth Powder	Fine Fabric Products	Dish Products	Regular Shaving Cream	Brushless Shaving Cream	Both	Hair Tonic or Dressing (Men)	Lipstick	Face Powder
Milwaukee	99.2	98.8	44.6	64.5	68.8	62.2	83.1	53.1	52.1	49.6	54.0	80.8	36.6	99.3	99.5	32.6	29.5	N.C.	N.C.	N.C.	N.C.
Indianapolis	96.2	97.8	44.6	54.5	75.6	72.9	86.4	49.8	47.1	45.9	58.8	83.2	30.3	98.6	99.7	31.1	32.5	N.C.	48.7	84.7	93.6
St. Paul	99.2	98.0	35.9	63.2	70.1	71.3	82.8	37.1	55.6	52.5	49.2	85.8	29.6	99.7	99.1	N.C.	N.C.	N.C.	N.C.	84.5	84.3
Duluth-Superior	99.1	98.0	38.4	59.1	73.8	73.2	81.6	36.4	56.8	54.2	48.7	85.8	31.8	99.1	99.4	N.C.	N.C.	N.C.	N.C.	84.5	85.4
Columbus	98.5	98.6	33.6	66.2	70.8	69.7	86.5	43.9	42.9	39.6	54.6	80.2	42.0	100.0	100.0	N.C.	N.C.	N.C.	38.2	87.0	85.2
Omaha	99.9	99.9	49.7	57.1	71.7	72.0	84.2	38.5	50.8	48.7	49.5	83.2	29.1	99.8	100.0	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
Birmingham	94.1	99.5	29.0	60.2	N.C.	86.1	92.5	39.8	34.2	N.C.	53.7	92.3	24.2	99.9	100.0	N.C.	N.C.	N.C.	47.8	N.C.	N.C.
Washington, D. C.	97.2	96.8	32.7	62.7	74.9	76.0	87.8	42.7	34.9	32.0	62.3	85.0	35.8	99.5	99.8	40.2	34.1	N.C.	N.C.	N.C.	N.C.
Salt Lake City	98.9	99.7	52.5	56.7	72.9	85.5	83.9	40.2	50.2	47.9	61.8	79.3	46.8	99.1	99.7	25.6	29.3	N.C.	64.5	N.C.	N.C.
Fresno	98.9	100.0	48.7	58.1	72.4	77.1	85.8	37.0	48.7	45.5	55.1	77.9	47.2	99.3	99.7	N.C.	N.C.	N.C.	67.3	N.C.	N.C.
Modesto	98.5	99.5	49.2	61.3	73.8	79.4	82.2	34.7	57.0	54.5	53.5	77.6	48.8	98.0	99.7	N.C.	N.C.	N.C.	68.1	N.C.	N.C.
Sacramento	98.6	99.5	39.2	65.0	73.8	74.3	87.0	37.6	51.1	48.8	59.3	74.8	50.2	98.0	99.4	N.C.	N.C.	N.C.	61.2	N.C.	N.C.
San Jose	98.6	99.4	49.6	57.2	72.9	73.1	84.9	39.7	48.1	46.0	56.7	76.4	45.9	98.9	99.6	N.C.	N.C.	N.C.	N.C.	N.C.	N.C.
Seattle	98.7	98.9	29.5	66.7	75.0	70.8	85.2	33.8	51.1	50.2	59.2	78.6	38.4	99.3	99.9	41.9	21.8	N.C.	N.C.	N.C.	N.C.
Spokane	99.6	100.0	35.4	60.1	78.2	75.2	84.4	32.9	44.2	44.9	50.7	74.4	33.9	95.5	98.4	N.C.	N.C.	51.8	46.4	83.0	83.7

The above table indicates the per cent of families buying different toiletries in different markets. The letters N. C. designate that the surveys did not cover product usage in that market. The percentages do not reflect quantities purchased or the amount spent for a product.

Effects of Certain Astringents*

A study of their effects on the permeability of frog skin using radioactive tracer techniques. . . . Interesting results discussed.

RUSSELL E. LUX† and JOHN E. CHRISTIAN

Normal frog skin permeability to sodium ions and iodide ions was studied using sodium-24 labeled Na Cl and iodine-131 labeled Nal. The effect of certain aluminum salts as astringent agents on normal permeability was determined. A rather unexpected increase in the rate of sodium and iodide ion penetration was noted.

THE ACTION of astringents upon the human skin membranes is not well understood, and the literature on permeability is confused and contradictory. However, it is generally agreed that astringents have a protein-precipitating action which, when applied to a membrane, lessens permeability of that membrane. Goodman and Gilman (1) state that astringent effect is a surface effect, and that the permeability of the cell membrane is greatly reduced.

Previously described methods of evaluating the effect of astringents on membranes include the work of Schuetz (2), who made observations on the suppression of the mucous secretion of frogs after application of the astringent to the breast of the animal, and correlated his findings with astringent activity. Madison and Christian (3) were able to compare the effect of astringents on absorption of sodium ion from the gastrointestinal tract and after subcutaneous injection in the rat by a tracer technique. Govett and de Navarre (4) report evaluations of astringent activity by noting the shrinkage in area of a section of frog skin treated with astringent, and also by noting the decrease in osmotic flow through a portion of frog skin after treating with astringent.

With the recent advances in the utilization of radioactive tracers, new techniques for studying permeability have been devised in this laboratory (5). Astrineffect on permeability was evaluated quantitatively using radioactive tracer techniques by determining the extent of permeability change caused by treating frog membrane with astringent preparations. The findings showed that the astringents used increased, in every case, the permeability of frog membrane to iodide and sodium ions; a finding which was completely unexpected and heretofore unknown.

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Experimental

The following procedure was used for studying the effect of aluminum salt astringents on permeability of frog membrane: live immobilized frogs (species *Rana pipiens*) were treated with 250 mg. of an astringent cream, which was prepared by incorporating the desired amount of astringent in a water-washable cream base. (The base was shown to have no effect of itself in membrane permeability.) The astringent cream was brushed on a 6-cm.^{2} area of the frog back. A 6-cm.^{2} area adjacent to the treated area was left untreated and served as the control. At the end of sixty minutes, the animal was killed, pithed, and the astringent rinsed off the membrane portion that had been treated. The membrane was divided into two similar portions, the treated and the untreated. Using No. 8 cotton thread, the two membrane portions were attached over the ends of 12-mm. glass tubing cut in lengths 15 cm. long, the ends of which had been slightly flared to prevent slippage of the membrane. The membrane was kept moist during the attaching process.

After trimming away excess membrane, 2 ml. of tap water was placed in the upright tubes, and any excess moisture was blotted away from the exposed membrane. The tubes with membranes were then lowered simultaneously into 4 ml. of radioactive iodide[1] (I^{131}) solution having an activity of 200,000 counts per minute per ml.[2] After allowing eighty minutes for equilibrium conditions to be established, 0.1-ml. samples were taken concurrently from the tubes for activity measurements.

It should be noted that excised portions of frog membrane such as this have been shown by many workers to retain "normal" permeability characteristics. In all cases the membranes were oriented so that the morphological inner surface contacted the radioactive solution, and the membrane was extended to a

[1] The iodine-131 used in this research was obtained on allocation by the U.S. Atomic Energy Commission.

[2] Assay of radioactive samples was carried out in the following manner: 0.1-ml. aliquots of the solution to be counted were deposited on strips of filter paper 1 x 5 cm. which had been previously impregnated with 10% NaOH. Such strips were then dried thirty minutes under an infrared lamp and, after mounting in cellophane, were counted by placing in the closest proximity, directly under and parallel to, an Eck and Krebs tube. Counts were corrected for background and decay of the isotope, the latter when necessary.

depth of 3 mm. in the radioactive solution. The iodide solutions had a pH within the range of 7.4 to 8.3, and the experiments were carried out at room temperature.

This method was extensively used in testing $AlCl_3$, $Al_2(SO_4)_3$, and aluminum methionate[3] in various percentages. In this work the understanding is implicit that any change in membrane permeability may be followed by comparing the rate of penetration of I- through the membrane portion being studied with a control membrane portion from the same animal. Thus, any treatment of the membrane which renders it more permeable will be characterized by the more rapid passage of I- through the treated membrane. The rate of passage of the I- is determined by radioactive assay.

The results of experiments on a large number of animals showed without exception that the astringents tested in varying concentrations increase permeability of excised frog skin. This was an unexpected result and therefore was investigated in every possible manner. Orientation of the membrane was reversed, methods of application of astringent changed, solutions of astringent instead of creams were used, radioactivity level altered, and, in order to prove that this effect was not peculiar to iodide ion, the permeability of sodium-24 labeled sodium ion, a positively charged ion, was studied. Without qualification, the conclusions that permeability is increased are inescapable. In addition to this, the amount of increase in permeability is proportional to concentration of astringent and increases with time of contact with the ion under study. The amount of increase in permeability of various concentrations of $AlCl_3$ at the time intervals which the treated membranes were in contact with the iodide solution is given in Fig. 1. The plot of results shows that at any time the effect of 5% $AlCl_3$ is approximately twice that of a 2.5% $AlCl_3$, and that 10% $AlCl_3$ gives an effect approximately twice that of 5% $AlCl_3$. Equivalent to the foregoing statement is to say that the slope of 5% $AlCl_3$ *delta* plot is approximately twice that of the 2.5% $AlCl_3$ *delta* plot, etc. Thus, it is possible to calculate the slope of the *delta* plots and to arrive at values characteristic of the percentages of astringents. If one then plots the slopes of the *delta* plots against concentration, a straight line relationship is obtained showing that the effect of the astringent on membrane permeability is directly proportional to the concentration of the astringent used. Similar results were obtained with aluminum methionate and aluminum sulfate. Table I reports the experimental data obtained with 2.5% $AlCl_3$ and is typical of the results obtained with other concentrations and other astringents. Table II summarizes the results obtained with all of the astringents tested.

Summary

1. The iodide and sodium ion permeability of frog membrane is shown to increase after treatment with aluminum salt astringents. Every manner of change in the experimental conditions, without any exception, showed this effect.

2. The increased permeability effect is shown to be directly proportional to the concentration of the astringents used, and may be thus utilized as a means of evaluating astringency of the salts tested.

3. The technique developed may be applicable to comparing the effectiveness of antiperspirant preparations and may be extended to the study of the effect of a variety of pharmaceutical preparations on skin and other membranes.

[3] Synthesized in the laboratories of the Purdue University School of Pharmacy.

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Cosmetic Excise Tax Collections

COSMETIC excise tax collections for the years of 1949 and 1950 and also the collections for the months of 1951 so far issued are given in the table following:

	1951	1950	1949
January	$12,255,363	$ 9,836,052	$ 9,648,063
February	12,867,842	11,654,681	12,984,776
March	8,534,569	6,811,063	6,796,181
April	5,746,348	6,985,099	6,913,884
May	9,293,461	8,316,993	6,983,445
June		8,136,742	7,625,450
July		7,965,373	6,776,881
August		9,671,335	7,807,221
September		7,542,472	6,859,446
October		7,900,314	6,760,409
November		8,159,612	7,738,779
December		7,781,091	7,312,007

Being a five per center is no disgrace. It's a legitimate business. Five per centers bring together sellers and buyers—as do steel, foodstuff, real estate and other brokers. But avoid contacts with those who peddle influence to obtain government contracts.

"May I arrange a point of sale display for the three bottles you're taking on consignment?"

WHAT THE

RETAIL BUYERS REPORT

Chicago Buyers Fear Cosmetic Industry Faces Loss-Leading Threat as F.T. Prices Totter

JEAN MOWAT

Chicago—Buyers brows are furrowed here in Chicago. There is considerable concern over how the recent Supreme Court fair trade ruling will affect the cosmetic lines. As we pointed out in these columns last month, cut rate, special and two-for-one promotions have been the order of the day for quite a while now. While such offers keep the merchandise moving, they do form a bed of TNT on which the industry can lull itself to sleep in sweet phony security. It looks now as if bed, security, et al. are about to be blown skywards. In fact this may have happened already as you read these words.

Even before the ruling the industry found itself in a highly competitive cut-throat and unstable position. Merchandise was kept moving artificially. We are now about to find out how unstable the industry's position really is.

Cosmetic Loss-Leaders?

What the biggest pessimists among the buyers really fear is that the cosmetic lines are about to go in for the loss-leading business. What this would mean to the small cosmetic retail outlets is obvious. As regards the manufacturers, they would be placed in a highly unstable position, about which they could do very little because of the highly competitive, monopoly-lacking, luxury nature of the industry. In other words, these pessimists believe that, come what may, the manufacturer will in the long run take it on the chin.

Current Sales

The lines that have featured $1 colognes in the past two summers are again leading in sales. The same is true of the deodorants that are featured in plastic containers to sell at $1. "If it's a $1 it will sell," was the comment of a Chicago buyer. She pointed out that women were watching their dollars very carefully and demanded much for the $1 which they spent in the cosmetic section. Lipsticks also fit into this bracket of selling, as do foundation creams and shampoos. Bath oils have been priced at $1 but are less active in sale, but only because showers seem more popular. Some very special "buys" were featured on this—in the store but not advertised—and sales were substantial.

Travel Containers

"The manufacturer who will give us a smartly packaged travel kit, at moderate price," said a buyer in Omaha, "will do a good Christmas business." This statement was based on the fact that each winter there are more and more people taking their "summer" vacation in tropical countries and need such a kit. Also it must be light in weight. If a holiday is restricted to two weeks one is going to fly, and so the plastic containers take on new importance.

"But be sure and select only the best plastics," is the warning of a buyer in Highland Park, Ill. "We found that there is *plastic* and plastic much to our sorrow and expense. Today we purchase from the best makers in the field and while the price is slightly higher than for an inferior product, we have not had complaints."

Cosmetics as Gifts

Throughout the larger stores there are summer-time counters or sections (in all convention cities) that feature gifts. Yet the smart and slightly "screwy" packages which are not accepted in the cosmetic section at this time of year, find spot selling in the gift sections. It has been decided that it is ease of selection and pleasing arrangement which has made this possible. Also the idea is featured not as a *cosmetic* but as a GIFT.

Summer season gets into full swing as public goes all out for unbreakable, spillproof, easily portable packages.

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Fair trade ruling threatens to unsettle the cosmetic market as toilet articles may be offered as loss-leading bait.

•

Manufacturers may have to rebuild sales contacts extensively as wartime personnel competition spells high buyer contacts turnover.

The difference is a sale whereas with the many displays, scattered from end-to-end of the average cosmetic counter one is left in a muddle as to what is good and what is just merchandise. The gift section solves the problem. Many slow department sellers have moved into the best selling class in the gift department.

Half Price Items

An outstanding cologne and perfume line, now being re-bottled, was available at unadvertised half-price, without expensive packaging and in a neat flat carton. It was a steady seller in this area for many weeks.

This item was not fair traded so that the sale offered an unusual opportunity for women to replenish their summer colognes with a type that is lasting. One other leading firm that has a good reputation for honest merchandise also conducted a half price sale and buyers were delighted with the results that each of these nationally featured lines produced.

Too Many Colors

Buyers are again complaining about the multitude of shades in lipstick and nail polishes that flood the market, whereas one half of these would be ample and increase business for every one. One store in the middle west has combined its $1 items to make this a new approach to the "what's the price?" and have found it good.

Los Angeles Retailers Ignore Price War Threats; Wartime Turnover of Buyers Ruins Old Contacts

DON COWLING

Los Angeles—Toiletries here practically were ignored in the flurry of price cutting that followed the supreme court decision on the maintenance of fair trade prices last month. One centrally located drug store plastered its windows with soaped lettering saying that low prices had reached Los Angeles. Inside, the perfume case carried a large sign saying all merchandise in the case would be sold at a 25% discount. In the case were many top perfumes and toilet waters, but the attempt caused no excitement. Merchandise managers from adjoining department stores shopped the store, but none felt that following suit was necessary. At this moment there is no feeling of unease among merchandisers of toiletries in Los Angeles, at least.

Promotion of the Month

Top promotion on the coast the past month was the personal appearance in a selected list of stores of two of Helena Rubinstein's male demonstrators, one on make-up and one on hair.

In Bullocks Los Angeles these gentlemen were presented in a circular booth in an aisle of the toiletries section. Response was adequate, but far from the horde that stormed the section during the appearance of Manka and her seven satellites a few months ago. We repeat that Mme. Rubinstein has the formula for success in toiletries promotion: a nationally known name, national and local advertising, many, many permanent demonstrators, and a troupe of travelling ones. That setup is tops. Lesser lights in the industry can aim at that peak and, by following it as completely as finances permit, appropriate for their lines a proportionate percentage of the business constantly being brought to department stores by women eager for improved personal appearance. And that is most of them.

A simpler method was that used by Matchabelli in promoting their cologne and cologne stick combination. We found that item well displayed throughout the territory, the featuring being in large part due to the extremely attractive packaging of the combination. A sure sign that it was right was the sight of women shoppers buying two and three packages at a time.

From looking at the really impressive display of metal compacts one would never dream that metal shortage is just around the corner. Since display space must be figured on a basis of sales returns metal compacts really must be selling well. We wondered, as we passed counter after counter spread lavishly with the many designs, what buyers will display in June, 1952 that will equal or surmount the sales figures run up in June, 1951 by metal compacts. Maybe they're all figuring to get it while they can, trusting to manufacturers to present them with a figure lifting special next year.

Private Brands

There is here a growing tendency on the part of multiple unit operations such as the May Co. stores to feature their own brand of toiletries and drugs. Macy, of course, has always gone in strongly for that sort of selling, and while the A.M.C. has always carried their Aimcee items, so far as we have observed they did not feature them. But you can see many May Co. items in May Co. toiletries sections, around here anyway, with no trouble for searching. A coast toiletries manufacturer is rumored to have buttered his bread nicely this past year by going aggressively after private label business in addition to selling his own trademarked line. Not, we hasten to disclaim, for the May Co., in so far as we know. Possibly you will see a resurgence of this kind of toiletries merchandising during the era of hard-to-get staples and fair trade uneasiness and confusion.

Which leads to a bit of speculation about toilet waters and colognes. Are we going to hot-weather-half-price-special toilet water and cologne business out of a regular markup for the manufacturer? Such a procedure is all right by the retailer. So long as his markup is intact the manufacturer can half price all he wants to. But you can't help wondering how long it will take to condition women shoppers to expect half price on many items that they go to the toiletries section to buy. How long can manufacturers afford to continue this program in the face of impending shortages and sharply rising costs?

Indications are that manufacturers will have to take cognizance of the necessity for maintaining their standing in a given store in the face of the impending turnover of store personnel in defense areas. The buyer likes a line, she goes into a war plant or her husband is transferred and she goes along. The manufacturer who has enjoyed a substantial and dependable sale of his line in her store must take quick heed of the change of supervision and bring his heavy artillery up. The same goes for a demonstrator, or a salesgirl who likes the line, or the PM, or the salesman, or whatever. In the times ahead that is going to be another headache for the manufacturer. National advertising is all very well, but the sale is made at the point of customer contact. You'll quite likely see some intensive education programs being polished in the days immediately ahead.

Waves, Suntan Items Pep up Pittsburgh

LENORE BRUNDIGE

Pittsburgh—Early summer cosmetic needs have been better than usual so far as home permanents and suntan products are concerned.

The Permanent Season

This is the time of year when permanents are in heavy demand. The Hudnut permanent for children's hair has had good response, with a heavy percentage of the sales being made to women who have very fine, hard-to-curl hair.

In sun tan cosmetics, "Sunstyk," the stick lotion has had excellent response. Vacation-bound customers like the idea of ease in packing and elimination of carrying lotion that could spill. The Harriet Hubbard Ayer sun tan lotion also got off to a good start here when it was introduced.

Utility items have rated considerable advertising space, due to storewide sale promotions by large firms here. Bargain-hunters have been crowding counters, and this has naturally helped cosmetic sales.

Shampoo Kit Promotion

One store has been doing continued business with a "Curley" shampoo kit that includes a special comb-brush, shampoo and conditioner. A different crew of girls comes in nearly every week, resulting in drawing crowds around the counter. Although the promotion has been going on for weeks, it continues to do brisk business.

In nail polishes, Cutex in the new spill-proof bottle has had excellent reception. Newspaper advertising has been carried out with a defi-

nite program. Reports are that women like the idea very much.

The Higher Priced Products

The five-dollar units (like Denney's "Invisible Beauty Strap" and the hair restorer "Bon Coif") have done very well. The hair restorer has already had a number of repeat customers. Chief complaint is that people expect quick action and express dissatisfaction, in spite of fully explanatory instructions.

The "Beauty Strap," like Arden's "PermaLift" lotion, has had greater response than some buyers expected. The average woman apparently is willing to part with dollars when an intriguing suggestion of youth is subtly promised.

Dallas Business Booms; Tops Last Year's

JEAN ROBERTS

Dallas—Business in Dallas' department stores and chain drugs is, almost without exception, at least as good as during the same period last year, and in the majority of cases even better. Most department heads anticipated a slump and have cut down, thus far needlessly, on the number of items in stock.

During the past month, graduation and father's day have taken the bulk of advertising and promotion. Results were even better than expected. Gift packages designed by the manufacturer for such occasions went very well.

Promotion now is turning to hot weather and vacation items. Colognes, sun tan oils, hand creams, deodorants and depilatories are being featured extensively. One store which featured a hair care display and promotion involving shampoos, hair oils and home permanents, stressing the need for extra care during scorching Texas summers, is repeating its campaign this year. Clerks have been given some special coaching on this subject.

With summer, home permanents —perennial sellers—have taken still another jump. Procter and Gamble's Lilt is going especially well.

A relatively new advertising medium which is bringing good results for cosmetic counters is television. Both A. Harris & Co. and Sanger Bros. have daily programs on the air. An average of three times a week is allowed the cosmetics departments. Direct reaction can be definitely checked . . . and has been good. Window tie-ins are being used by more and more stores for tie-in promotion.

Summer Business Buzzing as Elizabeth Arden, Rubinstein Lead Summer Products Parade

MAYNITA GERRY

Atlanta—We don't know of course, not having the national picture in front of us, but chances are that business here is doing better than in your locality. True, it is a bit freakish and unpredictable, much like the weather, it has its ups and downs, but we seem to be better off than the country-wise average. Anyway, that is the impression we get from financial reports. At least price wars have not reached as far south as Atlanta at this stage of the game. The consensus at the moment is that we will probably escape it altogether—or if it does pry into our market, it will be of brief duration and cause little damage.

Gift Buying Booming

Business generally continued good during January, February and March, slowed down considerably (some report 'completely') during the first two weeks of April, but picked up again immediately, under the stimulus of mother's day and graduation buying, both of which ran closer to deadline than formerly, and has been moving forward steadily since then, with few signs of serious letup. And latest reports indicate a sudden spurt of buying, for no accountable reason, with practically all cosmetic departments reporting strong activity. Specialty shops in particular are doing well.

Broken down into individual products, we find Elizabeth Arden's Blue Grass, a summer perennial in these parts, enjoying great popularity—followed closely by Helena Rubinstein's White Magnolia, in both the plastic-bottle, liquid form, and the new perfume stick. Deodorants —good to excellent, for both men and women. Sun preparations, particularly Charles of the Ritz' Sun Bronze—good. Indelible lipsticks in the lighter shades—also good. Treatment lines—fair. Hair preparations continue good.

If credit for the continuation of fair-to-good cosmetic business can be laid at any one door, local department heads are prone to pass it on (with orchids) to the manufacturers for excellence in packaging and merchandising, which within the past few years has increased their visual appeal 100 per cent.

A new product that has invaded the field of problem skins to the tune of a well-spent $10 is Anatole Robbins' "Neutralure," boosted into an enviable position by editorials in leading magazines and recommendations by skin specialists. Indications locally are that Robbins' has scored again!

Rubinstein, Revlon Displays Show Their Mettle; Stumbling Block Locations Boost Sales

MAGGIE FLEMMING

Buffalo—Rearrangement of toiletries merchandise from one part of the department to the other, coupled with revised display techniques, are proving great sales stimulants at J. N. Adam's. Fancy goods, moved from the rear of the department to the side of a front island counter, zoomed appreciably in purchases for mother's day, graduations, and June-bride showers.

Trip up the Customers

Items for father's day were assembled at a father's day Bar right inside one of the main entrances where they attracted all incoming customers. Included in the presentation were such lines as Kings Men, Sportsman, Yardley, Seaforth, Old Spice and Lentheric. The handsomely repackaged men's line in Faberge added considerable excitement to this rearrangement, as did Max Factor's Signature line for men —especially his new Lazy Shave package.

Displays Pay their Way

Most arresting was a Revlon display whose all-aqua-packaged items achieved a feeling of restful expanse and beauty. Items included Revlon's aquamarine mist, aqua soap, aquamarine lotion and aquamarine deodorants. Another outstanding display consisted of Rubinstein's Stay-Long Lipsticks, which are dominating lipstick sales here. All the varying shades were exposed in opened sticks, attractively arranged on a counter pedestal, their colorful variety lending more sales allure than could have been accomplished by colored shade-charts alone.

A special promotion of Tussy's Jalma was on at J. N.'s—the cleansing powder that washes and removes many fresh stains from fine fabrics. Packages of it were on every

toiletries counter and a special contest was in progress among toiletries clerks, with points being tallied for the sale of various sizes and cash bonuses awarded each week to the seller of the three largest volumes. J. N.'s TV shopping program had been utilized on this item only three times in the past two weeks, yet the results were remarkable.

L. L. Berger featured a two-tiered flower cart bedecked with magnolias and garlands of cedar. The two tiers displayed items from Rubinstein's white magnolia line—talc, liquid and solid cologne, bath powder, anti-perspirant perfume spray deodorant, and combination packages.

At the Wm. Hengerer Co., latest news concerns a revival in popularity of the $1.98 Color Comb introduced last year. A solid cologne promotion is underway and doing wonderfully, stimulated by four window displays tied in with fashion, solid cologne displays on fashion floors, and brandy snuffers bubbling with cologne fragrances activated by dry ice throughout the toiletries department.

Cincinnati Summer Season Average; Specials Make the Difference; Solid Colognes Solid

MARY LINN WHITE

Cincinnati—Early summer business was average, with most toilet goods counters meeting last year's figures and no more. Specials were meaning the difference between black and red for many departments, and the booming sales of solid colognes did the trick for others. Helena Rubinstein's solid colognes were a hit wherever sold, and one buyer commented that Coty's entrance into the solid cologne field, coming soon, is confirmation of the general feeling that solid colognes are no flash in the pan, but are here to stay for years.

Deodorants Good

Stick deodorants were moving, too, but Stopette appeared to be the city's favorite. The ease of application plus its effectiveness seemed to be the reason. Plastic squeeze bottles, however, may have been part of it, since they've had a very good acceptance here, even when sold empty.

The early and hot summer season meant several things: the Tussy price-reduction on its deodorant cream was even more of a success than usual; "Coppertone," the sun tan oil that has some tan of its own, was selling faster and earlier than usual, and was the favored item of its kind, and sales of powder base were good, as women made their change-over to darker foundations a few weeks early. The Coty special with the Shaki deodorant going free with toilet water was a boon to one store (McAlpin's). Ann Haviland's reduced toilet water, Coty's Muguet and other promoted colognes were doing extra well.

Oddly enough, in the hot weather, some of the treatments were going well, too. Rubinstein's deep pore cleanser was doing well, and Yogurta, the cream that contains yogurt, was a gratifying item at Shillito after radio mentions.

The hot weather meant a spurt in the hair preparations. In one department (Shillito) Arden's pin curl permanent even topped Lilt; in another Toni and Lilt were tied for first place, and in a third (Mabley) a wave shampoo called "Donna Lo" was walking out. This curl-shampoo has not been much-advertised, but it could make a sizable dent in home perm sales, I think, if it was assured that it is a good product. Donna Lo seems to be good. The ease of its use would tempt many gals away from the trouble of timing, curl bobbins, neutralizing etc. Tintaire and Blensol were doing well, as was a comb with a colorcake in it.

Max Factor's representative traveling through here didn't have overwhelming luck, though there was plenty of traffic by her counter. People just weren't in the mood to buy, the department head said (That department is away from the main cosmetics department.) Perhaps people could be put "in the mood" by a simple device, which certainly seemed to work at Pogue's: the entire department reeked of scent from a couple of fountains. But women were standing almost elbow to elbow at every counter as a result, apparently, of that, since there were no other particular promotions.

Most departments didn't feature leg make-up, but the few who did weren't sorry. Beach accessories, such as make-up travel kits were successfully sold.

Cosmetics departments seemed to get a good bit of the graduation-and-bridesmaid-gift business this season. Father's day sales were last-minute, with shaving-aid kits most popular.

Cuts, Graduation Gifts Up New Orleans Sales

LEE MCKENNON

New Orleans—Reports this month indicate sales are still a big drawing card for the customers. Elizabeth Arden's Blue Grass Cologne and atomizer sold together for $1.95. Marked down from $2.95 they enjoyed a brisk business. Dorothy Gray's cologne at half price drew in many purchasers, making friends for the line and stimulating the sale of her other items. Lancome's perfumes reduced from $42.00 to $11.95; $22.00 to $7.95 and $10 to $3.95 moved extremely well.

Graduation Gifts Up Sales

Graduation gifts were the objective of many shoppers. Faberge's new men's sets sold well for such gifts. The buyer commented that the small duo package of Faberge's men's lotion and talc shaker went far better than these items packaged singly in larger containers. The Atomette atomizer and compact went very nicely as gift items as did Mary Chess's toilet water this season.

Solid colognes are moving quickly but the small purse size still outranks the larger size as a favorite.

Deodorants are selling better than ever—although they always were a good item. Revlon's deodorant, both the liquid in plastic squeeze bottle and the cream in plastic flat jar, is selling well. The customers indicate they like the color of the containers, the plastic, and the smooth creamy texture of the contents. The buyer says this line has no tendency to dry out or change odor with age.

Depilatories sell just about the same in any season, buyers comment. Evidently American women are not limiting hair-removal to a summer season but consider it a part of year-around good grooming.

One buyer says sun-tan make-up and lotions do not seem to move as well here as in other localities but other buyers report a good sale. Dorothy Gray's Golden Orchid and Sunburn Cream packaged together with the lipstick in a plastic blue-striped bag is selling fast. Helena Rubinstein's Sun and Wind Pruf as well as her Sun-Tint is also going well. Buyers like the way her Liquidine is moving.

New items are always attractive, especially when a good house produces them. Frances Denney's Invisible Beauty Strap and Prescription Shampoo are making the buyers happy, pulling in the customers and adding up sales.

Grasse, France, and the May Rose

Why important increases in the prices of oil are inevitable. . . . Prices of flowers established. . . . How the flowers are cultivated. . . . Understanding of situation afforded by discussion of current problems

THE month of May brings the Rose to the Grasse manufacturers. This flower ranks third among the floral productions of the town and its surroundings: it used to be the second, just after the Orange flower; it has now been supplanted by the jasmin.

The perfumery rose has required a long selection of varieties in view of obtaining together the maximum of qualities: abundance of flowers and petals, rusticity, resistance to cold weathers, diseases and insects, percentage and quality of essence.

Among the number of more or less suitable types, Centifolia, Provins, May, Damask, Musk, the May or Provence rose-tree seems to possess most of the required qualities. The delicate fragrance of its flowers is approached by no others.

It is an hybrid of the Gallica and Centifolia rose-trees. The first one originated in the near East and was imported in France from Syria during the 13th century; the latter comes from Caucasus and has been known in France since more than three hundred years.

The Provence or May rose-tree, cultivated in the Grasse region, is not without reproach: it does not only require lots of care for its culture but also fears late frosts and intense heats, both causing the buds to fall.

The rose is cultivated in the Grasse country and also in the surrounding villages, principally Le Plan, Mouans-Sartoux, La Roquette, Vallauris, Roquefort, La Colle, Pegomas, Plascassier.

It is usually multiplied by means of the suckers that grow around the plants, which are plucked up with a few roots, just before or after Christmas, according to the weather and planted directly where they are to grow. These suckers should be selected on the less thorny plants which give more flowers, but this care is not always taken, and the two varieties—with and without thorns—are practically cultivated. It can also be multiplied by means of cuttings, planted in a nursery in order to develop roots, but the plants so obtained are less floriferous and this method is not much used.

Grafting is also utilized, either on wild briar or dog-rose, or on a half wild rose called Indica Major, preferably the latter as the first one suffers in the hard and dry soils of the Grasse region. The grafted plants are much more powerful, with a greater resistance to the absence of water and they give more flowers. But this method is long and costly and is practically very seldom used.

The May Rose does well in all kinds of soils, in the light and sandy as well as in the heavy ones, suffering less of course in the latter of the lack of water. It likes

Airplane View of Grasse, France

sunny exposures, on the hill sides, and fears the late frosts in the bottom of the valleys.

The suckers or the rooted plants are planted, as mentioned previously, from the end of Autumn to the end of February preferably from December to the beginning of January, on parallel lines separated by four to five feet, the plants being at a distance of approximately 18 inch in the line. Holes should be dug, each plant put in place with manure and fine soil but this method is too long and costly and, in practice, the suckers are forced into the ground with a sort of dibble called "travelle" in the local dialect, a two feet long iron rod with a wooden handle at one end and a small fork at the other. The plants are then cut at two shoots out of the ground.

Culture care includes pruning, winding round and fastening one to each other, digging, hoeing, and, when possible, irrigation.

The total production will thus be very small, hardly the half of the yearly standard and the price paid for the flowers has been fixed in consideration of this situation. The growers will receive 193 francs per kilo

(Continued on page 65)

NEW PACKAGING and PROMOTIONS

Bymart's content-identifying carton

BYMART, INC. is introducing its new product, Tintair home hair coloring, in a Gair-Reynolds carton gravure-printed red, black, gold and white on metallic foiline. Circular cut-outs on the front panel and top of the cartons permit visibility of hair coloring shade stamped on the bottles contained, thus preventing customers from replacing examined bottles in the wrong carton.

REVLON is marketing a new combination anti-perspirant and deodorant in its Aquamarine line. The product comes in two forms, as lotion in a plastic squeezable bottle and as cream in a jar. Each sells for $1.10.

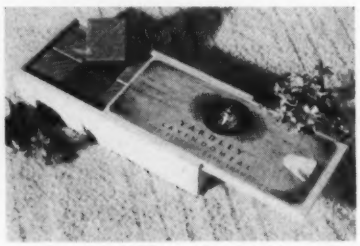
DU BARRY launched Petal Pink, its newest color for powder, foundation and lipstick, with a ball promotion May 23 at the hotel St. Regis Roof, New York, N. Y.

NORTHAM WARREN CORP. is adapting the Cutex Spillpruf non-spill and self-measuring neck to its two other Cutex lines, Nail Brilliance at 25 cents and Pearl Brilliance at 39 cents.

HAZEL BISHOP INC. is scheduling an approximately $2,000,000 lipstick campaign, said to be the largest lipstick drive ever made. The campaign will feature a half hour weekly Freddy Martin television show over the NBC network, television program participations, newspaper and national women's magazine advertisements, and spot radio announcements.

DERMETICS will repeat last years' 33 1/3% off price promotion on the Super Rich line of hydronized beauty oils, starting September 1 and continuing through October. The promotion does not apply to the Goodbye dry skin kit containing the same items in a combination of smaller sizes.

YARDLEY OF LONDON is adding a new compressed tablet form to its Lavendomeal line for scenting and softening bath water. Promotion will stress its softening effect on the skin. Packaging consists of a



Yardley's tablet scenting package

wooden box containing ten tablets individually wrapped in green and lavender paper. It is priced at $1.25. The firm is also re-introducing its oatmeal and complexion soap, said to be made according to an improved formula. The product was discontinued because of world war II material shortages. Promotion will stress the cake's new shape which permits only the corners of the soap to rest on the wash basin. A beige and red box containing three cakes sells for $1.00.

COTY is offering a free sample vial of Liquid Shakti, its new body deodorant, with each of its bath preparations.

HELENE CURTIS INDUSTRIES, INC., has entered the men's toiletries field with Suave for Men, a hairdressing. It will have an independent advertising program. A water-soluble product, an average of three drops are said to be enough to keep the hair in place. Packaging consists of a squeezable plastic bottle of alligator grained plastic in a coppery hue. The item retails in two sizes, 1¾ ounces at 60 cents and 4 ounces for $1.00.

J. B. WILLIAMS CO. is introducing a purse-sized tube of its Skolex sun allergy cream. Promotion will emphasize local sun-sensitiveness. The new ¾ ounce tubes, individually boxed, retail for 39 cents. They are packaged one dozen to a counter display carton. Both the display carton and product are miniatures of the original 69 cent Skolex.

TUSSY COSMETIQUES will introduce its Treatment Set in August with a special price and adolescent appeal promotion. The special set contains a cleanser, Creamy Masque and Medicated Lotion, a hexachlorophene product which may be used as a spot cover-up or as a powder foundation. The lotion comes in two shades. The cleanser is in a black glass 4½ ounce capacity jar, with pink silk screened letters, the lotion is in a clear 2 ounce capacity bottle with black lettering and a reversed taper pink plastic cap. The box is pink, trimmed and lettered

Tussy's teen-age Treatment Set

in black. It is being introduced at $2.00. The same company has just introduced Permastick, its new stay-on lipstick, available in six shades. The product is packaged in a metallic blue case with a polished brass holder. It sells for $1.00. This firm has also added a stick perfume to

its Midnight line. Wrapped in foil, the product comes in a glass bottle sprayed in ceramic blue transparent color with gold lettering and stars, topped with a brass cap decorated with concentric rings. The outer carton is blue foil with gold lettering. The ¾ ounce size retails for $1.50.

HUDNUT SALES CO., INC. is introducing a new counter and display stand holding six packages of its children's home permanent refill kit. Actual-size full color package reproductions underneath the packages of real merchandise are intended to give the illusion of a full display, even when the stand is partly empty.

COLGATE-PALMOLIVE PEET CO. is introducing its new Palmolive aftershave lotion nationally with a combination offer. With the purchase of a tube of Palmolive or Colgate shaving cream an introductory bottle will be given free of charge. The regular price of the lotion is 29 cents per two ounce bottle.

LAMOUR HAIR PRODUCTS will introduce a cosmetic curler consisting of treatment pads impregnated with lanolin, intended to deepen the waves. National distribution is scheduled to take place within a few months. The product sells for $1.25 per six curlers and $2.25 per dozen.

CHERAMY is introducing April Showers deordorant talc in a green

Cheramy's deodorant talc

metal container adapted to travel requirements. The product retails for 50 cents.

ELIZABETH ARDEN is summer promoting Sleek, a cream depilatory, Velva Leg Film, a leg make-up in three shades, Velva Leg Film Buffer, a leg polisher, and Ardena Velva Bath Mit, a fragrant leg make-up remover. The make-up sells for $1.25 and $2.25, Sleek retails for $1.25, the film buffer for 75 cents, and the bath mit for $2.00 and $5.00.

LUSTRE CREME SHAMPOO is being promoted in a nation-wide advertising and display campaign, featuring Hollywood stars and tied in with Modern Screen magazine.

CAMPANA SALES CO. is test marketing Sheer Magic, its new liquid make-up base, in Chicago. The product comes in six shades and sells for 79 cents per bottle.

DAGGETT & RAMSDELL, INC. has introduced a gift set containing its shaving cream, a 50 cents seller, and after shave lotion, regularly priced at $1.00. The red combination package retails for $1.00.

HELENA RUBINSTEIN is re-packaging its line of cologne sticks in Gair-Reynolds foiline cartons in pastel colors. A different color is used for each of the four scents, but designs

Rubinstein's repackaged cologne stick line

follow the same style. Packaging is completed with a ribbon and bow-knot around each carton.

GOURIELLI is scheduling an August promotion for its two new teen-age skin products, Emulsion soap and Sulfo cream. The soap is said to help clear teen-age skin of blackheads and pimples. The cream is claimed to contain sulphur, to be greaseless, odorless, and vanishing, and to serve as make-up foundation. The soap sells for $1.50 per three ounce jar, the cream for $2.00 per 2⅜ ounces. A combination package of both products sells for $3.50.

WRISLEY has repackaged its Bath Superbe soap in a deep aqua box. The product comes in six fragrances and is priced at $1.25 per box of four cakes.

THE HOUSE FOR MEN has added a combination cologne deodorant and body rubbing product to its His line of men's toiletries. Promotion will stress convenience and effectiveness of the product when traveling where bath and shower are not available. Packaged in an unbreakable, spray-type plastic bottle, it sells for $1.25.

PARFUMS CHARBERT, INC. is marketing a new scented deodorant lotion. It is claimed to check excess perspiration moisture for at least 24 hours without removing tissue moisture.

Charbert's deodorant lotion package

Packaging includes a light weight plastic bottle and a sponge applicator which permits the lotion to be applied directly onto the skin, eliminating squirting, spilling, and hand rinsing afterwards. The item retails for $1.25 per two ounce size.

WOODBURY SHAMPOO and Jergens Lotion are being offered as a combination package through August 30. The 25 cent shampoo and the 50 cent lotion will retail combinedly for 49 cents.

STANDARD LABORATORIES has repackaged its anti-perspirant Nonspi in a two-tone, green and white carton. The bottle has a plastic "sprinkler" top for application directly from the bottle. The closure cap is white plastic. The product is said to be made according to a new formula and to be harmless to fabrics. Retail price is 40 cents for the one ounce bottle, 60 cents for the two ounce size.

LEON HERBERT announces his new perfume concentrate in 10 fragrances. The concentrate comes in a small, octagonal bottle with contrasting black plastic cap 2 inches in height and ½ an inch in diameter, and is said to hold several months' supply. It retails for $1.25.

HARRIET HUBBARD AYER'S new sun tan lotion is claimed to be vanishing and to screen the sun's harmful rays while permitting tanning. It is boxed in a miniature cabana and retails for $1.25 per four ounce size.

Book Reviews

S.P.C YEARBOOK (and Buyer's Guide) 1951 Edition, 320 pages, cloth bound, United Trade Press Ltd., 24 Bride Lane, Fleet Street, London E.C. 4., Price 1.10.0.

Editor Freddy Wells has done another annual service to the toilet goods industry of England, Colonies, yes and for us too. Because he has an International point of view, the material in this annual guide will serve the Briton and Yankee alike.

The 1951 Guide has a number of reprinted articles from the contemporary Soap, Perfumery & Cosmetics, to which has been added a variety of tables, laboratory methods, cosmetic formulations, foreign standards and specifications for some raw materials and finished products. A substantial market and export section augments the buyers part of the book.

Any company, particularly one doing business in the British Commonwealth of Nations, will and should have a copy of this 1951 Buyers Guide and Year Book. It is packed with information.—*MGdeN*

RIECHSTOFFE, SEIFEN, KOSMETIKA. H. Janistyn. 2 volumes, size 5¾ x 8½ inches; 1278 pages in all, in German. Dr. Alfred Huthig Verlag, Heidelberg, Germany, 1950. Price DM 98.

The two volumes are paged separately. In Volume I, 504 pages are devoted to a dictionary of raw materials, cosmetic and perfumery. While most of the European trade names are included, a number of American specialties such as Arlex, Carbitol, Methocel, Nacconol, to name a few are not mentioned. This is understandable when one realizes that little if any American literature reached Germany during the war years.

The balance of volume I is devoted to a dictionary of some perfume specialties chemical and trade names, followed by formulations for perfume of various types for different uses as in extracts, soap, creams and lotions. The only gross mistake noted is the reference to Irium as being sodium metaphosphate.

Volume II is devoted to the chemistry and physical properties of cosmetics. It is divided into four sections namely, solutions, powders suspensions and emulsions. Page 463 shows Jersey City as being in New York instead of in New Jersey.

All of the present day cosmetics are considered. In general the work reflects an international point of view and is quite up to date. Unfortunately, some completely unsafe cosmetics continue to be mentioned such as thallium acetate depilatories, thorium and other radioactive creams and beryllium sulfate deodorants.

An index to both volumes is found in volume II. It appears to be fairly extensive. Both paper and covers are inferior and very similar to other European books. The books are fairly well made otherwise. It is this reviewer's belief that the author might have rearranged both volumes to better advantage for the reader. Patents are given here and there but not in any consistent manner. Thus Menthyl salicylate carries a patent number, but Menthyl anthranilate does not. In this day of cosmetic patent infringements, one can be given the wrong impression in this respect. The author should have done a much better job with patents or should have refrained from using them entirely.

The book is written in typical style of the author and gives many useful ideas, particularly to Europeans since the present work attempts to reflect American advances in particular. These are not very complete however. The work appears to be a re-write of the same author's KOSMETISCHES PRAKTIKUM. In spite of this, it will have a useful place in your library. —*M.G.deN.*

INTERNATIONAL RIECHSTOFF-KODEX. Arno Muller, 5½ x 8½ inches, 377 pages, Dr. Alfred Huthig Verlag, Heidelberg, Germany, 1950. Price 28 DM.

This is the third revision of the author's previous international compendium of aromatic materials, printed in English, French and German. While the author's style is a bit confusing, it appears to be fairly complete.

Actually there are 8 chapters covering synthetic aromatics, perfumes bases, a combination of the above arranged according to odor groups, fixatives, solvents, sunscreens, key to translations, tables and a list of 335 suppliers (an amazing number) of perfumes and aromatics throughout the world.

Probably the major criticism of this work is the use of abbreviations for journals that are not considered standard in scientific circles and the inconsistencies in descriptions of materials listed. No serious grievous errors are apparent although minor ones such as the spelling of skin as *scin* on page 359, no doubt are bound to occur in a book published in three languages. The chapter on sunscreens is not as well done as the portions dealing with perfumes.

In all cases there are many references to patents and to the trade and scientific literature. These references are badly handled as one reference to the AMERICAN PERFUMER 54, 1939, for example. No *number* is given to the Journal quoted, hence the reference is useless. Nevertheless, it is a valuable book for your perfumery library.—*M.G.deN.*

SCHIMMEL BRIEFS, No. 1 through 189, bound into one volume. Schimmel & Co., Inc., New York 1, N.Y., Price $7.50.

Published by the company that has given the world the "Schimmel Annual Report" the Briefs are a strictly cosmetic venture of the American company.

Probably the most useful part of this thoroughly reproduced book is the detailed index of its contents, putting at the reader's fingertips all details given on any one product or subject covered. The contents have a considerable range and all of it is of interest to anyone in the cosmetic line. The book will be of greatest value to the perfume chemist and production manager.

The 189 Briefs, known throughout the world as the first literary effort of the American Schimmel & Co., Inc., comprise this collection. Bound in plastic, everyone will want one of these volumes. However, a limited printing restricts the availability. So, first come first served.—*MGdeN*

Better Business Bureau Issues Sun Products Advertising Guide

The National Better Business Bureau has published a guide to advertising of suntan and sunburn preparations. The report attacks advertising claims that a preparation can tan a skin or give a tan to the skin because such an effect is produced by ultraviolet radiation. The guide also advises that no specific claims be made either in advertising or labeling as to the time required to give a satisfactory tan. It does grant that a properly formulated preparation, accompanied with adequate directions, may be advertised as preventing sunburn or permitting tanning without harmful or painful effects.

Hints for Improving Production

Beware of the temptation to speculate in inventory against rising prices and shortages . . . . . Inventory speculation is the biggest danger in plant operation . . . . . New and improved equipment.

THE biggest danger in plant operation today is in inventory speculation. All of the temptations are being put before us. There are shortages but on the other hand there is abundance of a great many other things. When you tie-in inventory speculation with heavy overhead and unwarranted debt any plant management is asking for trouble today.

Many plant executives are today trying to buy far in excess of their normal requirements. Forecasts of drastic shortages in materials and supplies have been whispered about. The tremendeous demands of the armed services are enough to incite such scares.

The plant executive who ties up his capital in excessive inventory in any such items will find himself with a very desirable commodity on his hands should World War III come, but in the meantime he must have money to pay rent, utilities, salaries and buy other goods. He cannot pay these bills with the merchandise in his inventory.

Therein, is the greatest danger in inventory speculation. Such speculation, even when sound goods are purchased at the right price, is wise only when capital is available for investment (and sometimes it is not very wise from this standpoint). The temptation to speculate against rising prices and shortages is always great.

We must constantly bear in mind that funds must be retained for operation of our business until this period does arrive, if ever.

Maintaining inventory at the top level consistent with the volume of our business and our financial resources is still the very best procedure to follow. When and if such inventory shortages do hit no plant executive will go out of business because he has failed to take the chance of speculation. He will lose business to the firm able to so speculate, yes, but on the other hand he will not have lost his business in the meantime.

In these times every plant executive should have a duplicate order book or file system on the top of his desk. Therein should be noted every unfilled order and it should be examined and checked every morning. It is far too easy to find ourselves over-ordered beyond our ability to meet established credit terms should we be desperately searching the market for certain goods. Now, more than ever before, such a control is vitally necessary.

One of the most precious things any plant executive can have is the firm's good credit rating. If inventory speculation should endanger that rating it may take many years to build it back up if we survive the results of such speculation. Having our cash tied up in what is known as slow receivables or in heavy inventory is most unsafe even in normal times.

We all know that there are many hundreds of people in business today without background for such things as proper caution in inventory speculation. Many are war veterans who opened small business's after the last war. Nowhere in their training or experience is there anything to warn them of the dangers ahead. Their only thought today is of the shortages of the last war and their first impulse in almost every case is to order all they can everywhere and somehow find the money to pay for it. Their inventory speculation is extremely dangerous because in almost every case they are in no financial position to do so even on a small scale. —*Ernest W. Fair.*

Moving Powdery Materials

For preventing interruptions in flow of powdered materials from hoppers, pneumatically operated vibrators, available in eight sizes, are offered by SPO, Inc. They are also used for vibrating packaging tables, moving granular material through tubes and chutes and for fatigue testing assemblies. The vibrators are made to deliver from 2200 to 6000 impacts per minute depending on piston diameter.

New Flat Spray Nozzles

A new line of flat spray or fan nozzles has been announced by Bete Fog Nozzle Inc. More uniform

Nozzle for Uniform Coverage

coverage with less waste of spray is claimed for the new nozzles. Side jets containing coarse droplets have been eliminated and the spray pattern made heavier in the center than at the edges of the fan, it is stated. According to the manufacturer there is less overspraying due to doubling up of the sprays from adjacent nozzles with the result that the combined coverage is unusually uniform. The series include 13 discs made of stainless steel with flow rates of 1/10 to 10 gpm and spray angles of 50 to 90 deg. All discs are interchangeable. Built-in removable strainers are available for the smaller nozzles.

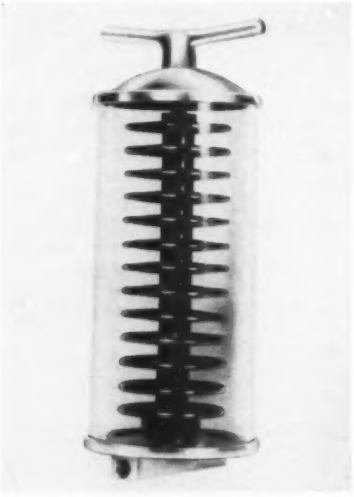
Refilling Horizontal Drums

For rapid refilling of drums when in a horizontal position a five

gallon funnel which clamps securely to the chime, freeing both hands for pouring, is offered by the Industrial Products Co. The funnel is made of heavy gauge galvanized iron.

Glass Walled Filters

A new glass walled filter, useful in research and development work especially and in commercial applications where the influent sus-



Filter for Research Work

pensions tend to have variable properties, is offered by Micro Metallic Corp. Porous stainless steel filter elements of the Surfamax and Gravitain types in glass walled containers permit full observation of the action of the filter. For development purposes the unit can be had complete with a centrifugal pump or a positive displacement pump mounted on an integral base. The filter septum is fabricated from porous stainless steel sheet. Pyrex glass is used to provide heat and pressure resistance. An integral stainless steel guard screen surrounding the glass body is provided for those applications involving pressures higher than about 40 psi as a protection against the possible hazard of damage due to shattered glass.

Partially Filled Packages

To measure the fill of bottles, paper, wood and plastic packages by means of high frequency current Photobell Co. has developed a method of n ıch interest. The method consists of passing a low amplitude high frequency current through the package as it is carried on a conveyor. The value of the current flow is a measure of the package fill. When the value indicates an empty package the conveyor is automatically stopped. High frequency current methods may be used for detecting empty or partially filled containers of paper, plastic, wood, glass and other nonconductors of electricity. Metal containers are usually not suitable for this type of inspection. The contents of the package can be liquid, solid or powder and must have certain electrical properties to aid the passage of high frequency current. Moisture is sufficient. Sensitivity can be adjusted to indicate empty, partially filled or non-uniform packages.

Cartridge Demineralizer

For laboratories and other users of up to 10 gallons per hour of high purity water the new Penfield permanent cartridge demineralizer is offered by the Penfield Manufacturing Co. It requires no heat or steam power; only the faucet need be turned on to receive the demineralized water, the makers state. It is equipped with a flow meter, a sight indicator that enables the operator to adjust intake flow to the proper rate. The cartridge may be quickly removed whenever the electric conductivity meter indicates that the resins need replacing. It is attached to any wall near a tap.

New Type Filtering Membrane

A new type of filtering membrane has been developed by Titeflex, Inc. It is known as well-screen membrane and is normally constructed of 316 ELC stainless steel wire formed to a screen of cylindrical shape. Used within the filter itself to support the filter cake which is the actual filtration medium, these cylinders, it is stated, speed up the filtration process. Clogging is eliminated, it is added, because of the triangular cross sectional shape of the individual wire. The membranes are available in various sizes and may be provided in any alloy which can be drawn into wire.

Self Cleaning Filter

A new industrial filter that is self-cleaning is announced by the Sparkler Manufacturing Co. It is designed for any filtering process where large amounts of solids are involved and where it is difficult or inconvenient to open the filter for cleaning. It is especially adaptable for use with any solution where water can be used to flush out the filter aid. A simple mechanical arrangement assures cleaning action whenever desired.

Pouring Liquids

A safe method for pouring liquids without spilling or splashing from cans into small containers is provided by the easy pour tilter 15 offered by the General Scientific

To Pour Liquids without Splashing

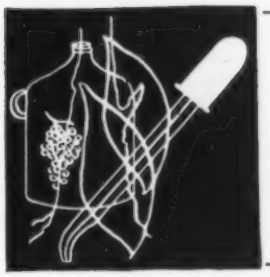
Equipment Co. The cradle is made of steel and fits any standard 5 gallon can. The makers point out that it is excellent for mixing or pouring as it is only necessary to pour in ingredients it is desired to mix and then give a few rocking motions to mix the contents. It is sold for under five dollars.

Labeling Various Containers

For spot and wrap-around labeling bottles, cardboard, plastic and metal containers and collapsible tubes at the rate of 35 to 50 per minute, Dumatic Industries offers two types of machines, one using glue, the other thermoplastic labels.

Material handling techniques are given in a handbook which sells for one dollar issued by the Electric Industrial Truck Assn., 3701 N. Broad St., Philadelphia, 40, Pa. It is a practical guide of 72 pages for the analysis of material handling operations and the application of unit-load method with power operated trucks and accessories.

Specifications of Homogenizers are given in a 12-page bulletin issued by the Cherry Burrell Corp. which will be sent on request.



Flavors

How to Make Flavor Tablets

Flavoring tablets save space, require no alcohol and can be made up to a fixed unit of flavoring power. . . . Procedure to make imitation vanilla, imitation maple and fruit flavor tablets.

MORRIS B. JACOBS, Ph. D.*

IN PRIOR articles in this section the methods for the preparation of flavoring powders and flavoring tablets were described and discussed. It was pointed out that the great advantage of these products over flavoring extracts, essences, and emulsions was the saving in bulk and the elimination of the need of alcohol in the formulation. While superior in these respects, flavoring extracts, essences, and emulsions have advantages of their own. In articles in this section in 1945 and in *Synthetic Food Adjuncts* (Van Nostrand, New York), the author discusses the advantages and disadvantages of each of these different types of flavoring products.

At any rate the great saving in bulk and the ease of distribution and use of products such as flavoring tablets led the Quartermaster Corps to set up specifications for the procurement of certain flavoring tablets.

Imitation Vanilla Flavor

Imitation vanilla flavoring tablets of 5-5¼ grains (the size of the common aspirin tablet) were the first flavoring tablets prepared successfully on a large scale for the Quartermaster Corps program. These contained vanillin and coumarin or bourbonal (ethylvanillin) and coumarin as the flavoring components. Since the total weight, however, of these flavoring agents per tablet for a flavoring power equivalent to that of a teaspoon of imitation vanilla flavor (for this was the unit of flavoring chosen) was much less than 5-5¼ grains, it was necessary to have a filler or diluent also. One important factor helping in the solution of this problem was the fact that vanillin, coumarin, and bourbonal were easily incorporated into powders capable of being compressed into tablets.

Pouring ingredients into mixer to get a uniform mixture of the various components.

The diluent adopted and specified was lactose, for in addition to its use as the filler or diluent, lactose acts as a binder and thus lends itself very well to tableting.

Starch is the other ingredient in these tablets. The starch serves as the disintegrating agent. When the tablet is immersed in the liquid portion of a recipe, the starch grains absorb water and swell thus disrupting and disintegrating the tablet and thus assisting in the solution of the flavoring ingredients.

Starch and the flavoring ingredients alone, however, are not compressable to any extent and tablets made from these components alone are friable and easily broken. Lactose crystals, when slightly moist, have the property of sticking to each other and to the other ingredients of a powder mixture. This mass can then be compressed by machine. After formation of the tablets, the lactose will set into a comparatively hard tablet, within twenty four hours, which can be subjected to the shocks inherent in bottling and transportation and even to rough handling without much damage.

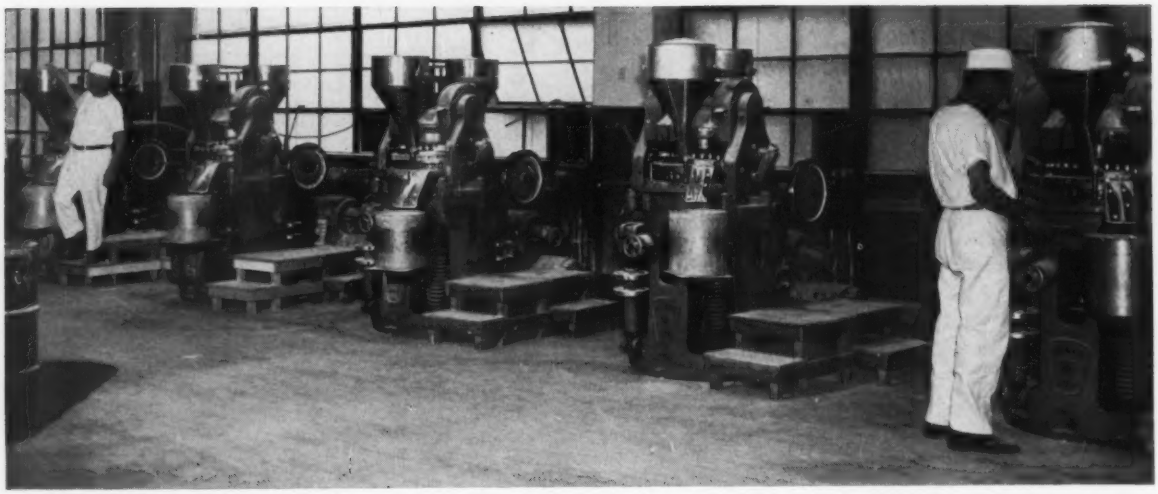
Vanillin and Coumarin Tablets

According to Quartermaster Corps Tentative Specification, C.Q.D. No. 56, July 1, 1942, vanillin and coumarin tablets should have the following formula:

Ingredient	%
Lactose	72.98
Corn starch	10.00
Vanillin	14.90
Coumarin	2.12%
Total	100.00

According to Quartermaster Corps Tentative Specification

* Professor of Chemical Engineering, Polytechnic Institute of Brooklyn.



A battery of Stokes rotary tabletting machines. Each can make tablets at speeds up to 675 per minute. Photos by F. J. Stokes Machine Co.

C.Q.D. No. 56, July 1, 1942, vanillin and bourbonal tablets should have the following formula:

Ingredient	%
Lactose	82.86
Corn starch	10.00
Bourbonal (ethylvanillin)	5.02%
Coumarin	2.12
Total	100.00

3½-Grain Tablets

In 1945, the specification noted above was amended (Quartermaster Corps Tentative Specification C.Q.D. 56 B, February 1945) in order to provide for the procurement of 3½-grain imitation vanilla flavor tablets. These were listed as Class 1 and the 5-grain tablets were listed as Class 2. The Class 1 tablets have the following composition for the vanillin and coumarin tablets:

Ingredient	%
Lactose	65.43
Corn starch	10.00
Vanillin	21.43
Coumarin	3.14
Total	100.00

The bourbonal and coumarin tablets have the following composition:

Ingredient	%
Lactose	79.72
Corn starch	10.00
Bourbonal (ethylvanillin)	7.14
Coumarin	3.14
Total	100.00

Since a smaller tablet is being prepared, the percentage weight of the vanillin or bourbonal has to be increased although the total weight of flavoring is about the same.

It is to be noted that since bourbonal has about three times the flavoring power that vanillin has, only about 1/3 the amount of bourbonal has to be incorporated into the formulations. Actually slightly more is used. The difference in the amount of bourbonal used in the second formulation and the amount of vanillin used in the first formulation is made up by increasing the quantity of lactose used in the second formulation.

These vanillin and bourbonal flavored tablets were used for purposes analogous to those for which imitation vanilla flavor was employed.

Imitation Maple Flavor

The problems in the manufacture of a suitable imitation maple flavor tablet were greater than those posed in the manufacture of imitation vanilla flavor tablets. At least this was very likely the state of affairs when the Quartermaster Corps was attempting to set up specifications for this product for at that time there were no acceptable solid or crystalline imitation maple flavor components available in commercial quantities.

Since the specification set up (as noted below), at least two imitation maple flavor components in solid form have been made commercially available. One is a compound made from amino acids and sugars, particularly alpha-aminobutyric acid and glucose, as described by H. M. Barnes and C. W. Kaufman (General Foods Corp.) *Ind. Eng. Chem.* 39, 1167 (1947), and the other is the aromatic specialty "Cyclotene" (Dow Chemical Co.). These materials very likely can lend themselves to the manufacture of imitation maple flavors with possibly less difficulty than that encountered when imitation flavor concentrates are used.

The requirements of the imitation maple flavor tablet was that it was to be of the 5-grain weight; that it was to contain sufficient color to simulate the amber or light caramel shade of maple syrup; and that it was to be of sufficient flavor power to flavor one pint of 60 per cent sugar solution to the intensity and character of maple syrup.

Quartermaster Corps Tentative Specification C.Q.D. 118C, February 24, 1945 set the following as the components of such tablets:

Ingredient	%
Lactose	63.25
Imitation Maple Flavor	19.55
Certified Food Color	7.20
Corn Starch	10.00
Total	100.00

The use of concentrated imitation maple flavor and proper mixing technique provides both for the control of the moisture content of the initial flavoring powder and uniformity of product.

The color, as mentioned in a previous article, should be dissolved, evaporated to a dry powder, and reground before admixture to the flavoring powder premix so as to avoid rainbow effects on solution of the tablet.

Fruit Flavored Tablets

Fruit flavored tablets were also prepared for our Armed Forces. The production of such tablets necessitated the formulation of very powerful flavors for sufficient flavor had to be incorporated in a tablet to do the flavoring ade-

quately. The production of such tablets also necessitated the use of flavorants with only a small amount of moisture for the reasons mentioned previously. Too much liquid of any type could not be tolerated either.

In general the components consisted of lactose, the necessary coloring matter, certified color being used, and the flavor mixture. The lactose was first mixed thoroughly with the coloring. A portion of the lactose and color mixture was taken and the flavoring added to this in small amounts and to a fresh portion of powder as previously described, until all of the flavoring was incorporated. This portion of the batch was then screened to break up any lumps and then was added to the master batch which was mixed and worked for uniformity.

Fruit flavor tablets were also prepared containing fruit acids like citric and tartaric acid. The weight of the tablet had to be increased to 15.4 grains (1 gram) in order to make up for the weight of the acid. Such tablets also present difficulty in sticking to the punches and the dies. This difficulty can be overcome by proper granulation and by control of moisture.

Organoleptic Tests

THE following correspondence on organoleptic tests in the food industry which appeared in *Chemistry and Industry* of London, England, is reproduced by courtesy of that publication.

SIR—The correspondence in your columns on "Organoleptic Tests in the Food Industry" initiated by by Messrs Adamson & Feuell has proved of great interest to many by offering a valuable survey of the various complications encountered in the application of orthodox statistical methods to a subjective or quasi-subjective test material.

As things now stand, almost everything has yet to be done and, in this connexion, I should like to draw the attention of those more competent than myself to carry out the necessary investigations, to Weibull's Distribution Function recently mentioned in *Nature* which, in conjunction with other methods, may contribute to the elucidation of at least one aspect of the problem. This function has the form:

$$P = 1 - \exp. \left\{ - \frac{(x - x_u)^m}{x_o} \right\}$$

where P is the probability of a characteristic (size, colour, etc.) being equal or smaller than x, while x_o, x_u and m are parameters to be determined observationally. With the aid of this function it has been possible to resolve many complex distribution patterns into their simple components and the necessity for such an operation may often arise in the course of statistical analysis relating to organoleptic tests.

A. A. NEWMAN

SIR—In the recent correspondence on organoleptic tests in the food industry, Harrison[1] suggested that Multiple Factor Analysis might usefully be applied to the study of the relation between component scores on food products. In their second contribution, Adamson and Feuell[2] have referred to work along these suggested lines, reported from the National Insitute for Research in Dairying.

The first study was a purely preliminary analysis of the relation between a number of rheological tests on cheese.[3] A second study of the relation between a number of electrical and rheological tests on plastics has just been published.[4] The main aim of this work was to test the method in order to see whether useful information, not available by other means, might be forthcoming. A further study including both rheological tests and subjective assessments of firmness, springiness, crumbliness, flavour and over-all quality of some 200 cheeses is now in the press.[5] The subjective assessments took the form of ratings on a five- or seven-point scale by three individuals. Stable differences between individuals were noted and have been described.[6] A study of further data obtained during the 1949 season is now being made.

Multiple Factor Analysis is based on the correlations between all tests or assessments, taken in pairs, although there is no *a priori* reason why covariances should not be used instead. In its present form, using existing computational techniques, the smallest number of "factors" is extracted, capable of reproducing the observed correlation coefficients, according to specified rules of procedure. The "factors" are normally less numerous than the original tests or assessments. Some of these "factors" may be defined sufficiently clearly and selected subsequently for describing the materials tested. Other "factors" may be purely incidental depending on the rather arbitrary grouping of the condition of testing. "Factors" are essentially numerically derived and expressed "principles of classification" and only certain of them may be inherent "properties" of the materials tested or assessed.

Adamson and Feuell are essentially correct in suggesting that Thurstone's "factors" are *a posteriori*, at least in preliminary studies in a new field. Once the main "factors" have been established and agreed upon (and this may be more a question of convention than an absolute issue) they may be used, *a priori*, for subsequent investigations. In fact, some English writers believe that this technique can be used to test hypotheses but not to formulate them.

There are a number of numerical restrictions and consequences involved in this form of analysis, which have not yet been adequately worked out. Linear relationships, as a first approximation, are imposed by the use of correlation technique and it is unlikely that rescaling would improve, uniformly, the adequacy of such an assumption. Mixed data including ratings are frequently correlated without knowing precisely what effect any peculiarities in different parts of the range may have. Thomson[7] has recently discussed the effect of some of the assumptions which are made and the computational procedures which are followed.

Sampling, or selection procedures, may play an important part in the precise numerical results obtained. The results have value only in so far as they remain reasonably stable from one investigation to another, carried out under comparable conditions. If, by the processes of selection, all the materials tested are undifferentiated with respect of one "factor" then, automatically, that "factor" will disappear from the analysis.

Adamson and Feuell suggest that the precise functional relationships are important in psychophysical work. However, unless the physical and psychological conditions can be specified and controlled precisely, anything in the nature of functional or even stable, empirical relationships may be difficult to establish. The writer is reviewing elsewhere some of the complex influences which must be taken into account in psychophysical studies.[8] The inherent variability of subjective judgments, except those of selected persons under

carefully standardized conditions, may imply that refinements beyond the assumption of linear relations, using appropriate scaling, are of little practical value. Without at least duplicate judgments this variability cannot be assessed.

An important difficulty in combining scores on different aspects of a given food product is that some of the relations between the separate aspects scored may not only be non-linear, but also require functions which are not single-valued, no matter how the scoring system is modified. In such instances, imposing linear relations will reduce considerably the apparent association between two sets of assessments. What this implies in terms of Factor Analysis cannot at present be stated, though Thurstone[9] does refer to this type of difficulty.

The suggestion that (Multiple) Factor Analysis should be termed Attribute Analysis, to differentiate it from Factorial Design as used by Fisher, would meet with little support. The term Factor Analysis (or Factorial Analysis), with its appropriate implication, is effectively entrenched into the extensive literature from psychological sources. In any case "attribute," in the statistical sense, implies a condition which is either present or absent and Attribute Analysis would imply restriction to processes of counting. Factor Analysis is an attempt to get away from mere counting towards what may be agreed upon as measurement and the most important "factors" are thought of as being capable of a continuous range of quantitative variation, within the samples tested or assessed.

As the applications of this general method are extended and investigations made into its potentialities and limitations, it may become more refined and effective. The interested reader is referred to three main text-books.[9,10,11] In addition, a restricted number of copies of the notes prepared for the Physical Society Exhibition (1949) are still available on application to the writer. These are intended solely as a brief introduction and not as a complete and final guide for purposes of computation and interpretation. The Industrial Handbook on Factor Analysis is yet to be written.

R. HARPER

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[2] Adamson, J. E., and Feuell, A. J., CHEM. & IND., 1950, 17
[3] Harper, R., and Baron, M., *Nature*, 1948, 162, 821
[4] Harper, R., Kent, A. J., and Scott Blair, G. W., *Brit. J. appl. Phys.*, 1950, 1, 23
[5] Baron, M., and Harper, R., *Dairy Ind.* (in the press)
[6] Harper, R., and Baron, M., *J. Dairy Res.* (in the press)
[7] Thomson, G. H., *Advancement of Sci.*, 1949, 6, (23), 267
[8] Harper, R., *Research* (in the press)
[9] Thurstone, L. L., "Multiple Factor Analysis," p. 323. Chicago: 1947 (Univ. Chicago Press)
[10] Burt, C., "Factors of the Mind." London: 1940 (Univ. London Press)
[11] Thomson, G. H., "Factorial Analysis of Human Abilities." Chicago: 1947 (Univ. Chicago Press)

Later References: Harper, R. Psychophysical Relations and Their Study. Research, 3,350 (1950). The Assessment of Food Products. Food, 19,371 (1950).

Essence of Mushroom and its Preparation. (Chem. Abst., *44*, 6547, 1950) Joseph Szuecs (one-tenth to Geo. M. Wiles). U.S. 2,505,-811, May 2, 1950. Essence of mushroom is prepd. by vacuum steam diatg. the essence from mushroom mycelium grown under aeration on a seed-oil residue substrate throughout which small mycelium inoculum particles have been dispersed. After the distn. the mycelium substrate is extd. with water and this ext. combined with the volatile essense to produce a flavor material for foods.

Useful **Books on Flavor**

Flavor by Ernest C. Crocker.
Philosophy of flavor perception, chemistry of flavoring agents . . . Methods of preventing off flavors in commercial products $3.50

Synthetic Food Adjuncts by Morris B. Jacobs, Ph.D.
Synthetic food colors, flavors, essences, sweetening agents, stabilizers and similar food adjuncts .. $6.25

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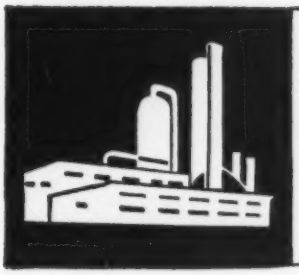
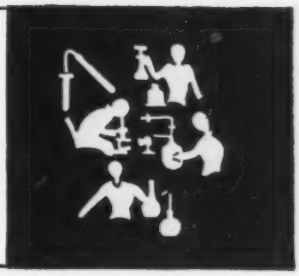


Soaps



Soap from Synthetic Fatty Acids

Increasing price and scarcity of natural fats focus attention on use of synthetic fatty acids made from the wax fraction obtained during the Fischer Tropsch hydrocarbon synthesis from coke.

PAUL I. SMITH

THE increasing price and scarcity of natural fats are responsible for a renewed interest in synthetic fatty acids, such as the C_9-C_{20} series made from the wax fraction obtained during the Fischer Tropsch hydrocarbon synthesis from coke. It will, of course, be remembered that during the war years a large tonnage of these acids was produced in Germany at Witten and Oppau, the former plant making about 400 tons per week during 1943 and 1944. Experience with the soap made from the German synthetic fatty acids disclosed one very serious disadvantage, namely its tendency to give off an unpleasant odour during washing which persisted on the skin for some hours. This was such a characteristic odour in Germany during the last war that it became known as the "German people's smell."

In spite of its unpleasant odour the soap made from synthetic fatty acids possessed good detergent properties, although inferior to those of soap made from palm kernel fatty acids, also excellent wetting and lathering characteristics.

Investigation of the synthetic fatty acids and the soaps made from them has brought to light certain important facts concerning the source of the bad odour and suggested means whereby an improvement can be effected. It appears that in the German process no attempt was made to remove the low molecular weight acids, some of

Paul I. Smith

which possess an unpleasant smell. Then again during the production of the soap the fatty acids were subjected to a temperature in the region of 360 deg. C., which decomposed some of the acids to form certain undesirable compounds, such as high molecular keto bodies, which are also odious.

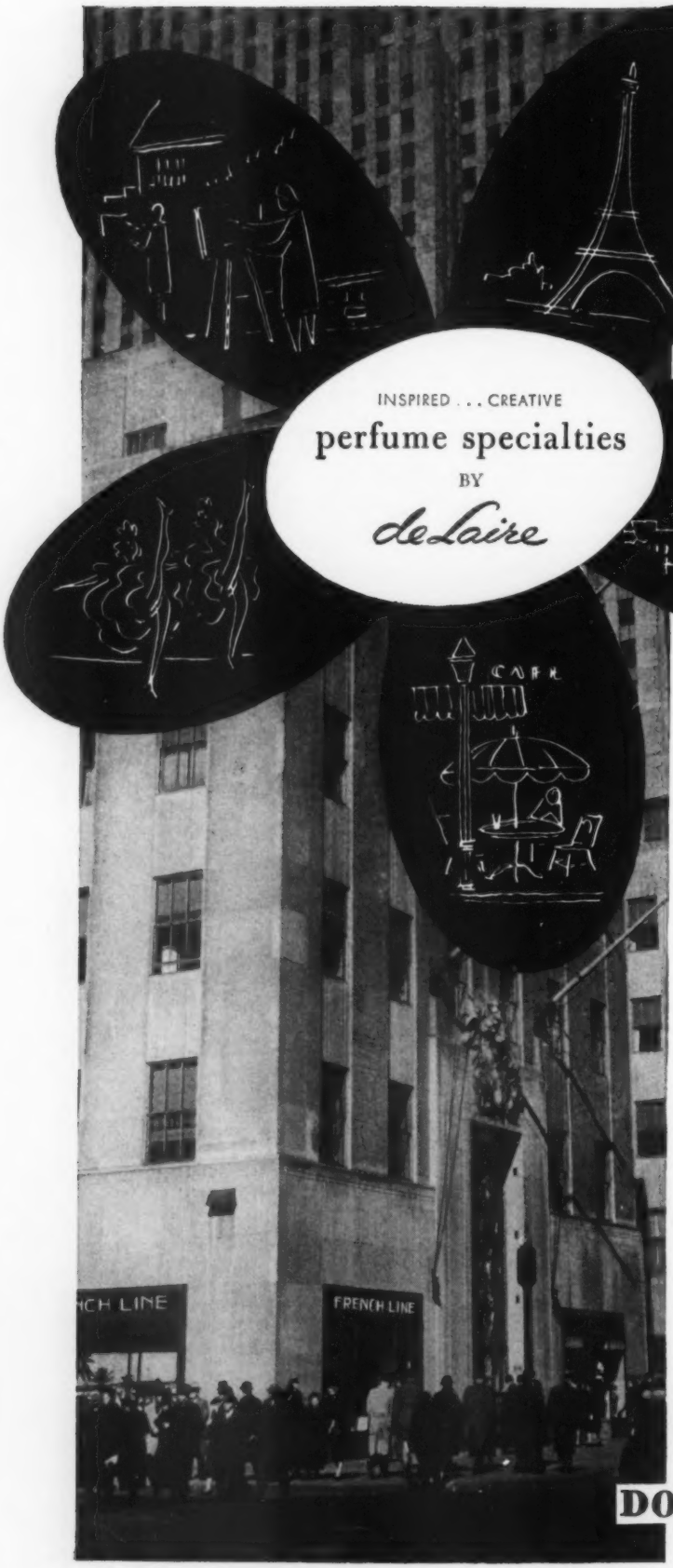
Recommendations for the improvement of soaps made from synthetic fatty acids include the following:—

1. Refractionation of the fatty acids, so as to remove the low molecular weight compounds.
2. Thorough washing of the acids with a small quantity of dilute caustic soda to remove the dicarboxylic and hydroxy acids.
3. More intensive pipe-still treatment of the soap to remove certain complex cylic compounds and high molecular keto bodies.
4. Use of additives in the soap to mask the odour e.g., addition of a reducing or oxidising agent to the acid mix before saponification.
5. Restriction of the quantity of synthetic fatty acids in the soap make to 5-10%.

It is, of course, possible that by using new methods of purifying the fatty acids, such as the low temperature solvent crystallisation process now employed for treating oleic and other natural fatty acids, a great improvement in odour could be effected. In the saturated fatty acid series the most important from the soap making viewpoint are the C_{15} and C_{17} acids, i.e. palmitic and stearic acids, and if these could be separated from the lower acids, then the soaper would have available a much more valuable raw material.

The German process for the conversion of synthetic fatty acids into soap was a relatively simple technique which did not differ markedly from the normal method of producing soap from natural fatty acids. Half the charge of synthetic acids was added to the required quantity of natural fatty acids and saponified with sodium carbonate solution. The liquid was well mixed with a mechanical stirrer and then caustic soda and a little salt added to fit. The soap solution was allowed to settle for 48 hours.

According to B.I.O.S. Final Report 1560 the contents of the pan contained two thirds by volume



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neat soap at 60-62% fatty matter content and 1.0 to 1.5% free caustic (NaOH) and 0.1 to 0.2% NaCl. The neat soap was then run to a crutcher where the remainder of the synthetic fatty acids was added together with an equivalent quantity of caustic soda to give a soap with 0.5% Na OH. The next batch was saponified on the nigre until after three cycles the nigre was purified.

It has been suggested that purification of the soap made from synthetic fatty acids could bring about an improvement in odour, but in many respects it is considered preferable to devote further attention to the purification of the acid mix before saponification so as to enable the soaper to have a greater control over production. One comforting thought is that synthetic fatty acids derived from petroleum or shale wax are not so objectionable as those obtained from coke by means of the Fischer Tropsch hydrocarbon synthesis.

News of the Industry

Lever Brothers Co. Opens New $25,000,000 California Plant

Lever Bros. Co. has opened a new $25,000,000 soap, detergent and shortening plant in Los Angeles, Cal. Raising of flags by John M. Hancock, chairman, and Jervis J. Babb, president of the company, was the sign for production to start. The plant's first shipments were sent by helicopters to the governors of the eleven western states within the plant's distributing area. The new industrial installation of six major buildings and facilities occupies one-third of a 30-acre plot eight miles east from downtown Los Angeles.

NPA Reports Steel, Plastics, Chemicals Scarcities

The National Production Authority announced on June 20 that steel and plastics were becoming critical, that alloy metals were in very short supply and that 77 chemicals were very scarce.

The following metals were reported as being in very short supply: zinc, aluminum, lead, copper, nickel, tin, tungsten, and such steel forms as tinplate, heavy forgings, die blocks, high alloy castings, sheet, wire, nickel-bearing stainless steel, structural shapes, seamless and welded tubing. Vanadium, chromium, carbon steel, manganese, hot rolled bars, plate, black steel and other stainless steel were reported in tight supply. Titanium, gray iron casting, carbon and tool steel and forgings were said to be in fair supply.

Regarding chemicals, acetylene, glycerine, sulphur, and sulphuric acid were in very short, ammonia, borax, caustic potash, chlorine, hydrochloric acid and phosphorous in tight supply, and glycols, soaps and paints in fair supply.

Of plastics, eight were said to be in very short, eleven in tight, and two in fair supply. Paper and paper board were reported to be in tight supply.

Pabst Brewing Co. Produces New Protein Cleanser

Enzyme, a new dry cleaning enzyme powder for protein stain is being produced by Pabst Brewing Co., Milwaukee, Wisc. The product is claimed to make stains caused by protein-base ingredients, such as eggs, milk, and ice-cream, removeable from such fabrics as cotton, wool, nylon, rayon and certain acetates. Because of its protein action, it should not be applied to artificial materials having a protein base. In use one tablespoonful of the product is diluted with a gallon of water.

Cynthia Andrews, Inc. Introduces Sing Shampoo

Cynthia Andrews Inc. has introduced Sing, its non-alkaline shampoo, in Syracuse, N.Y. Slogan of its campaign is "Stop, look and litmus."

New Class of Detergent Compositions Announced

A new class of cleaning compositions, based on a chemical principle long known but not heretofore applied commercially in the detergent field, has been announced by the Pennsylvania Salt Manufacturing Co.

The action of the new cleaners is based on oversize micelles or groups of molecules, formed by the various ingredients, which have the property of dissolving not only water-soluble soils taken up by normal soap solutions but also water-insoluble soils which can normally be removed only by organic solvents.

The solubilizing cleaners, as they are called, have little saponifying action and do not remove fatty soils by this mechanism, and while performing somewhat like emulsion cleaners, will go beyond these in cleaning range because of their solubilizing action. In addition, the company states, they have the capacity of removing soils by detergent action and continue to clean effectively even when loaded with soil.

Controlled Materials Order Allocates Packaging Metal

The Controlled Materials Plan which went into effect July 1 requires allocation of about 35 packaging items for the necessary steel, copper and aluminum. The order affects metal containers, packaging and processing equipment, closures, conveyors, motors, shipping containers, valves, pipe, tools, electronic controls, and regulating equipment.

Ciba States, Ltd., Rents New York Office Space

Ciba States, Ltd., 350 Fifth Ave., New York, N.Y., has leased the nineteenth floor in a twenty-one story office building, now under construction. The organization handles pharmaceutical products, dye stuffs, and other chemicals.

Interesting Patents

Shaving Preparation, Pat. 1,868,838. John McIntyre, Portobello, Scotland. Filed June 16, 1930. Serial No. 461,647, and in Great Britain Apr. 16, 1930. 1 claim. (Cl. 87–5). An improved self-contained shaving preparation consisting of a mucilaginous, aqueous liquid composed of water containing those constituents of linseed which are soluble in boiling water, of such a consistency as to leave a thin liquid film on the face, and a small quantity of a free alkali selected from the class consisting of caustic soda, ammonia and mixtures thereof.

Shaving Soap, Pat. 1,771,707. George F. Doran, Worcester, Mass. Filed Dec. 29, 1925. Serial No. 78, 233. 1 claim. (Cl. 87–5). A shaving soap formed by mixing together the following ingredients, triple pressed stearic acid approximately 53.6%, cocoanut oil approximately 17.8%, sodium hydroxide approximately 14.3%, potassium hydroxide approximately 14.3% and borax approximately 5%.

Shaving Composition, Pat. 1,803,076. Antonio V. Simone, Croton on Hudson, N. Y., filed Sept. 29, 1928. Serial No. 309,355. 1 claim. (Cl. 87–5). A shaving composition consisting of shaving soap 12 parts and glycyrrhiza 1 part.

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THE ROUND TABLE –

Oils Industry Members Advise Castor Oil Order Extension

The industry representatives of the Industrial Oils Industry Advisory Committee have recommended to the Production and Marketing Administration of the U. S. Department of Agriculture to continue the restrictions on the industrial use of castor oil during the July-September quarter of 1951.

Inventories and uses of castor oil have been restricted during the April-June quarter by Defense Food Order No. 1. The committee's industry representatives stated that the order helped to reduce industrial uses of castor oil and made more of this commodity available for the strategic stockpile.

Cosmetic Credit Men Summer Party August 17

Due to the illness of the popular executive secretary of the Drug, Cosmetic & Chemical Credit Men's Assn. the party scheduled for July was cancelled. It will be held August 17 at Westhampton Beach, L.I., N.Y.

Polaks Frutal Works Closes for Two Weeks Vacation

The entire plant of Polak's Frutal Works, Middletown, N.Y., will be closed for vacation from July 21 to August 5.

J. P. Remensnyder Chairman for Cerebral Palsy Campaign

J. P. Remensnyder, President and Director of Heyden Chemical Corp. will serve as chairman of the Chemical Solicitation Committee for the Cerebral Palsy Society's New York City campaign.

Mr. Remensnyder, who is well known in the chemical field is director, American Potash and Chemical Corp.; Member, American Chemical Society, American Institute of Chemists, Society of Chemical Industry, American Drug Manufacturers Assn. He is governor of Synthetic Organic Chemical Manufacturers Assn. and Drug and Chemical Club; director of Metuchen National Bank and Metuchen Building and Loan Assn.; member of Manhattan Club, Chemists Club, National

J. P. Remensnyder

Press Club and Metuchen Golf Club. Mr. Remensnyder's committee, which will be composed of leaders in the chemical field, will conduct an intensive campaign within the industry to help achieve the $750,000 city-wide goal.

Funds raised in the drive will be used to create and expand treatment and diagnostic facilities, education units, recreation centers, train urgently needed medical and other specialized personnel and conduct research.

Drug, Toiletries Manufacturers 1950 Advertising Up 28%

Drug and toiletry manufacturers are reported by the bureau of advertising to have spent 28 per cent more for newspaper advertising in 1950 than in 1949. Their advertisements ranked third in volume, following those of groceries and automobiles.

Dr. Arthur Behr, formerly of Dow Chemical Co., Dead

Dr. Arthur H. Behr, consulting chemist, Verona, N.J., died June 28 following a heart attack. He was born in 1896 in Duisburg, Germany where he was educated. He came to the United States in 1938 as chemist for the Great Western Electro Chemical Co. in California. When that company was acquired by the Dow Chemical Co. in 1939 he moved to Midland, Mich., and started developing the aromatic division of Dow Chemical Co., now the Bush Division of that company. He retired June 1, 1950 when he established a consulting business in New York and Verona, N.J.

Boston BIMS Schedules Golf Meet for August 16

BIMS of Boston will hold its next golf outing on August 16 at Woodland. The organization's first golf meet of the season was held on June 20 at the Dedham Country and Polo Club. Prizes were won by Thomas B. Howell, Cecil W. Rice, F. K. Newbert, David J. O'Connell, Edward D. Bement, C. T. Hoye, Jr., Edwin W. Martin and E. E. Aldrich.

Sales Forces Not Affected by War so far Executives Report

Despite the war sales executives have not deemed it wise to curtail the size of their sales forces according to a poll of members of the Sales Executives Club of New York. Three per cent indicated that they intended to cut down; and 96 per cent indicated that they would not do so; one per cent was undecided. The three per cent who intend to cut down the size of their sales forces were divided between transferring salesmen to other jobs and adopting a policy of not replacing men who are called by the armed forces.

COMPOSITIONS WITH THE *Modern* ACCENT

EXOTIQUE No. 6270

$28.50 *per lb.*

A heavy, lasting oriental, extremely powerful and clinging.

BOUQUET D No. 7618

$12.50 *per lb.*

Imparts a delightful effect, and lasting freshness, clear top note retaining full-bodied odor.

The art of combining fragrance has been developed into an exacting science in the Penick Laboratories. From the Light Florals to the Heavy Orientals, the distinctive creations of our perfumers offer appeal to the most discriminating tastes.

JADENE No. 7620

$20.00 *lb.*

A composition with a deep, full fragrance reminiscent of night blooming Jasmine combined with a lingering Gardenia afternote.

SOIE-VERTE No. 7631

$11.00 *lb.*

An artful blending of bergamot, citrus and aldehyde notes created for the perfumer seeking an unusual bouquet for his creations.

Featured on this page are a few of our outstanding compositions. Your investigation is invited. Please write for samples.

FLORAL BOUQUET No. 7653

$11.00 *lb.*

This fragrant bouquet of floral notes is an unusual and original composition recommended for a complete new line of perfume and cologne.

BOUQUET PERFUME OIL No. 7677

$12.00 *per lb.*

A retentive floral composition particularly useful in creams and lotions.

S. B. PENICK & COMPANY

50 CHURCH STREET, NEW YORK 7, N. Y.
Telephone COrtlandt 7-1970

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735 WEST DIVISION STREET, CHICAGO 10, ILL.
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DISTILLERS OF RARE AND QUALITY ESSENTIAL OILS—MANUFACTURERS OF AROMATIC CHEMICALS

Toilet Goods Firms Participate in Sponsoring Colored TV Show

Fifteen leading manufacturers were participating sponsors of the first commercial color television broadcast on June 25. They included Wm. Wrigley Jr. and Revlon, Toni home permanents, and Procter & Gamble for Ivory Soap and Duz. The hour-long program was televised over the CBS television network stations in New York, Boston, Philadelphia, Baltimore and Washington.

Closing date is August 1, 1951. The presentation of an award would be made at the organization's regular meeting in December.

N. B. B. M. A. Sets Convention for Chicago, August 18

The National Beauty and Barber Manufacturers Assn. will hold its 10th annual convention, featuring a luncheon, business meeting, and a gala dinner party, on August 18 at the Stevens hotel in Chicago, Ill.

Lever Brothers Co.'s new $25,000,000 plant in Los Angeles, Cal. Story on page 55.

T. G. A. Sets Calcium Stearate Minimum Standard Specification

The Board of Standards of the Toilet Goods Assn. has issued specification number 38 as a suggested calcium stearate standard minimum specifications for all purchasers of this material.

Michigan Chemists Hold Second 1951 Golf Meet

The Chemical and Allied Industries Assn. of Michigan held its second golf meet of the 1951 season at the Pine Lake Country Club on June 26.

Beauty and Barber Mfrs. Assn. Cancels 1951 Summer Outing

The National Beauty and Barber Manufacturers Assn. has abandoned its plans for a 1951 summer outing and golf tourney.

S. C. C. Opens Honorary Award Nominations

The Society of Cosmetic Chemists has opened nominations for recipients of its honorary award.

Revlon Introduces Indelible Lipstick in Big Campaign

Revlon Products Corp. has entered the indelible lipstick field. It has launched a half million dollar promotion campaign to introduce its new Indelible Creme lipstick this month.

Kay-Fries Reconstructs Damaged Plant

Rebuilding of the section of plant no. 2 of Kay Fries Chemicals, Inc., damaged by fire on June 5, has started.

Production of formaldehyde has already been resumed. Remaining units of the plant, producing organic intermediates, will be back in operation shortly.

Vad Manufacturing Co. Changes Address, Appoints New President

Vad Manufacturing Co., cosmetics manufacturer, has changed its address to 9 East 17th St., New York 3, N.Y. Harold Grossinger has been appointed president of the firm. Mr. Grossinger was formerly export manager at Atlas International.

Association Presses for Easing of Demonstrators' Restrictions

The National Hairdressers & Cosmetologists Assn. is pressing for state legislation to ease the restrictions on manufacturers' demonstrators. Bills easing such restrictions have already been introduced in Massachusetts and Minnesota, and the organization is cooperating with the Philadelphia Beauty Supply Distributors Assn. to attempt to bring about amendment to the Pennsylvania law.

The association favors legislation which will permit manufacturers' demonstrators, without further licensing, to operate in business quarters of supply dealers or at industry trade shows when they do so in the presence of licensed cosmetologists.

Wallace A. Bush Ungerer Sales, Advertising Manager

Kenneth G. Voorhees, president of Ungerer & Co., recently announced the appointment of Wallace A. Bush as general sales and advertising manager of this old, well-known, New York essential oil firm.

Mr. Bush is also secretary of the company and has been associated with Ungerer & Co. since 1937. He has served in various positions and has been in the essential oil industry for over 30 years.

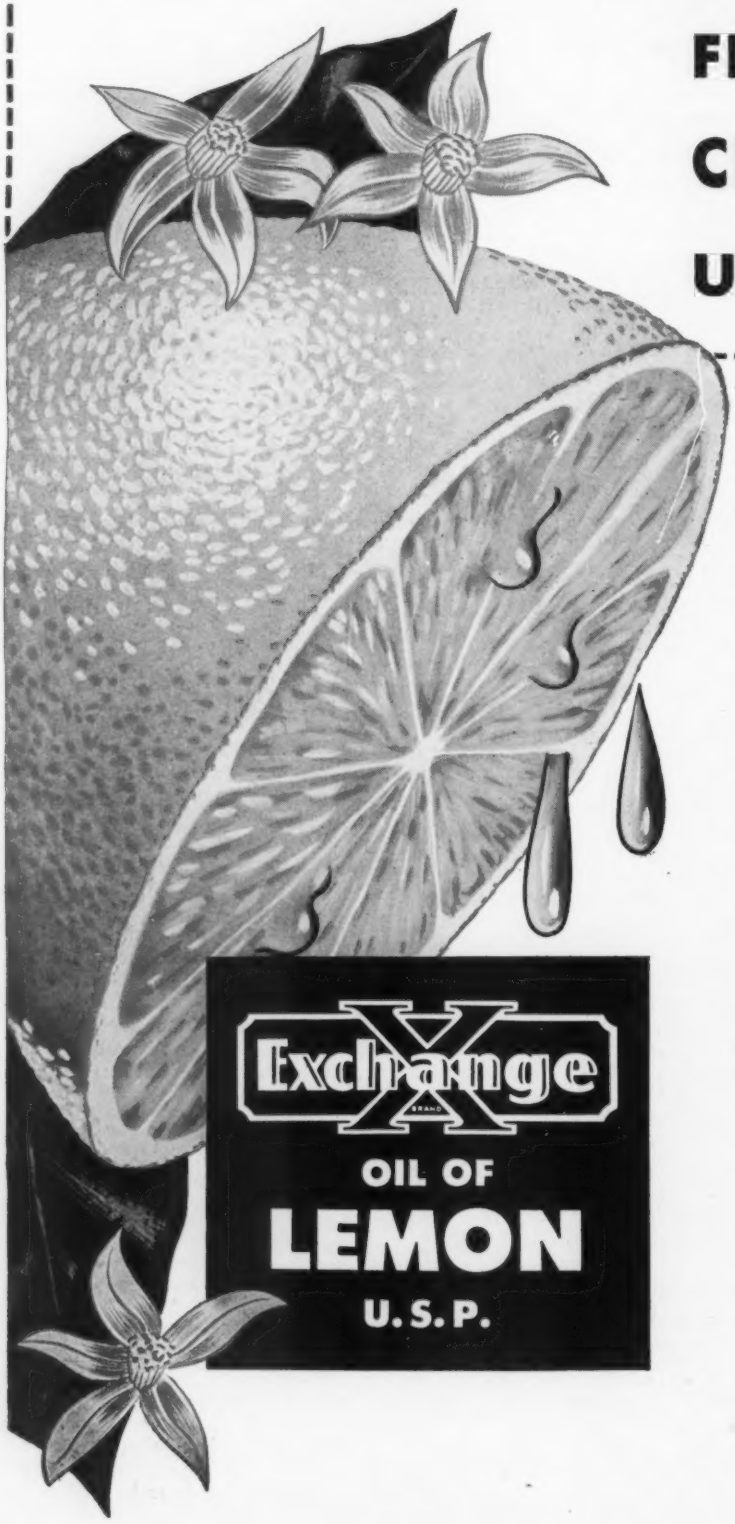
Mr. Bush's appointment will enable Ungerer & Co. to maintain closer sales supervision over their various branch offices located in the cities of: Boston, Philadelphia, Atlanta, Chicago, St. Louis and Los Angeles, as well as the general sales office in New York City. He plans a detail sales survey of the continent, United States and Canada, in anticipation of establishing additional representation in these territories.

Institute of Chemists Elects Councilors

The American Institute of Chemists has re-elected Dr. M. L. Crossley, consultant in cosmetics at the American Cyanamid Co., New York, N.Y., and Miss Florence E. Wall, consultant in cosmetics, and technical writing, to three-year terms as councilors. Newly elected as councilor for a similar term is Dr. John R. Bowman, head of the department of research in physical chemistry at the Mellon Institute of Industrial Research, Pittsburgh, Pa.

8 out of 10 say it's *best* for

FLAVOR
CLARITY
UNIFORMITY



Yes, more than 80% of all the lemon oil used in the United States is Exchange Lemon Oil!

This overwhelming endorsement by the trade is your guarantee that Exchange Lemon Oil delivers *quality*... quality in the form of superior *flavor* and unmatched *clarity* and *uniformity.*

Always specify it by the brand name when you order— Exchange Oil of Lemon. For complete satisfaction, accept no other brand.

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Distributors for:

CALIFORNIA FRUIT GROWERS EXCHANGE
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New Shopper Stopper
the
MODERN ROUND
by Maryland Glass
Yes, here's something new to give your products that first impression impact that pays off in sales. In crystal clear flint glass this new Modern Round is Maryland Glass' latest design for selling through packaging. Ideal for a line of related products. 1, 2, 4, 6, 8, 12, 16 and 32 ounce sizes in stock for prompt shipment. Caps furnished if desired. Send today for samples. See for yourself how attractive, strong and practical this new Modern Round can be. MARYLAND GLASS CORPORATION, BALTIMORE 30, MD.
Pack to attract in
Maryland Glass

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fragrance is your business.....

Whatever your requirements in
materials for perfumes and cosmetics, Givaudan
is equipped to give your demands
undivided attention. We offer a

VERSATILE SERVICE

that is geared to meet the
needs of small users and large . . .
and to provide to both, with equal consideration,
the advantages of our research and
perfume laboratories and the cooperation
of our experienced staff.

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"Yours For Quality
In All Things Fragrant"

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Want a Best Seller ?...

A HAPPY BLENDING of fragrance for your product might well produce an outstanding *sales* success story. Do what America's leading manufacturers have done—consult with Naugatuck Aromatics. You'll find a perfect combination of skill, experience and resources to help you with any perfuming problem.

Our chemists and perfumers can show you how to re-odor numerous types of manufactured items. They can help you add a neutral tone to almost any finished product. *Or* they can blend the one, distinctive fragrance that will help your product become a *best* seller.

Write, or call us—soon!

NAUGAROMES—For various industrial and commercial uses.

SOAPOLS—For bar, paste and liquid soaps.

SHAMPAROMES—For liquid, cream and paste shampoos.

MODERN BASES—For fine perfumes, colognes, toilet waters, toilet preparations, etc.

CREAMODORS—For all types of creams and lotions.

NAUGATUCK ⓔ AROMATICS

DIVISION OF UNITED STATES RUBBER COMPANY

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BRUNO COURT, S. A., GRASSE, FRANCE

MANUFACTURERS OF AROMATIC CHEMICALS—IMPORTERS OF ESSENTIAL OILS

Plan for Continuing Fair Trade Offered by McKesson & Robbins

An immediate result of the Supreme Court's decision to limit the applicability of fair trade laws was to loosen an avalanche of price cutting. Free prices for trade marked goods might upset retail merchandising throughout the nation.

Coty which fought for fair trade long before the fair trade laws were enacted adopted a trade policy in January 2, 1932 to assure a fair profit to every reputable dealer and has maintained that policy ever since. Jean Despres executive vice president in a letter to the trade announced that Coty, Inc. will use every legal means at its disposal to continue to maintain this policy and will make every effort to enforce its fair trade contracts for the protection of its customers and its trade mark.

A spokesman for Bristol-Meyers Co. stated that the company would do its part in the principle and practice of fair trade. It is studying the situation to determine what steps to take.

In some quarters it is quite generally felt that a continuation of fair trade must wait on action by Congress which is regarded as unlikely.

McKesson & Robbins Inc. have developed a plan to continue operations under fair trade laws which they consider legal under the interpretation of the Miller-Tydings amendment recently given by the Supreme Court.

The plan calls for making contracts with their distributors under which these wholesalers would agree:

1. Not to resell the company's products to their customers at less than minimum fair trade prices in states where fair trade is in effect.

2. To require all their customers to enter into a contract to resell to the consumer at not less than the minimum retail price.

The company has devised a simple contract by means of which it asks wholesalers to bind their customers to operate under the plan by showing on all of their customers' invoices the following legend:

"*Fair Trade Agreement.* Purchaser, by accepting delivery from seller of any fair traded commodity, agrees not to resell such commodity by direct or indirect means at less than the prescribed net retail minimum price published by the producer and distributor whose trade mark, brand or name appears on the commodity. This agreement not applicable to sales in non-fair trade states or District of Columbia."

In the opinion of the manufacturer each invoice containing the foregoing then becomes a legal fair trade contract and customers accepting the merchandise are bound by its terms.

In a letter to all their wholesale customers mailed June 1 McKesson Laboratories indicated that it was their belief, supported by good legal opinion, that the plan is completely legal in those states having fair trade laws. The plan was felt to be the first effective answer since the Supreme Court decision to customers who ask how can products now be legally protected under fair trade.

Max Factor Demonstrator Leaves for Latin-America Lecture Tour

Maria Luisa Huarte, world-traveling Max Factor make-up demonstrator, has left Hollywood for a six months tour of Latin-America. She will hold demonstrations in Colombia, Trinidad, British Guiana and Barbadose, Venezuela, Curacao, Aruba, Puerto Rico, the Dominican Republic, and Cuba. Prior to her visit to Hollywood she had just completed a similar lecture tour in Canada.

Max Factor (left) and Miss Maria Luisa Huarte, demonstrator, study make-up technique possibilities at the firm's make-up salon in Hollywood, Cal.

Toni Applies for Trademark "Tame" for New Product

The Toni Co., Chicago, has applied for the trademark "Tame." The company has a number of new items in various stages of research and will probably give the name to one of them, possibly a hair dressing.

Ralph Stevenson Heads Import-Section in OPS.

Ralph M. Stevenson has been appointed chief of the Essential Oil, Flavor Materials and Perfume Materials Section, Chemical & Drugs Branch, Rubber, Chemical & Drugs Division, Office of Price Stabilization, Washington 25, D.C.

Mr. Stevenson is a director of Givaudan-Delawanna, Inc., and is midwest sales manager of the company with headquarters in Detroit.

It is gratifying to the industry that a man so thoroughly familiar as Mr. Stevenson with the industry's problems has been appointed to this important post in Washington. In addition to his experience with aromatics and with perfume and flavor materials, Mr. Stevenson is equally familiar with the crude drug and pharmaceutical industries.

Optical Brighteners to Make Fabric Whiter and Brighter

Because Antara brightener products are optical whitening agents of high activity it is possible for soap companies to claim that their new products containing it actually make white fabrics whiter and colored fabrics brighter according to Harold G. Shelton in an address before the recent combined meeting of the Antara Products division of General Dyestuff Corp. with the technical personnel of Central Research Laboratories, General Aniline & Film Corp.

The brighteners he said are colorless, fluorescent, direct dyestuffs and like the more common colored agents of this class exhibit high affinity for textile fabrics. They are said to exhaust readily from extremely dilute solutions. According to Mr. Shelton the brighteners are stable to the common soap and detergent builders such as alkalies, starch and carboxy methyl cellulose.

Tintair Establishes Research, Product Development Stations

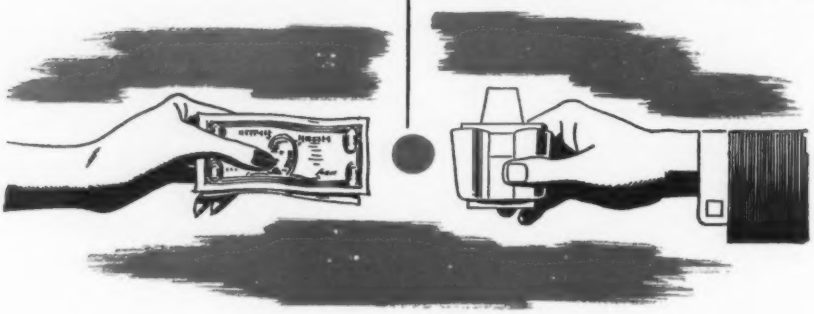
Tintair has established a research bureau in New York, N.Y., and research and product development and control laboratories in Newark, N.J.

Empire State Cosmetic Assn. to Hold Show in Syracuse

The Empire State Cosmetic Assn. will hold its annual show in the Hotel Syracuse, Syracuse, N.Y., September 10-13.

Point of Sale

PROVING GROUND OF PRODUCT QUALITY



Here is a tried-and-true way to make your line even more *marketable* and *profitable* . . . use pure, stable Verona aromatic chemicals for your bases. Then your perfumes, creams, toilet waters or soaps will reach the point-of-sale . . . *proving ground of quality* . . . just as you made them . . . with their fragrances as flower-fresh and appealing as when they left your plant.

Verona specialties

amuskal	For freshness and life in your compound, add 1/10% to ¼% Amuskal. Produces natural Tonquin Musk effect.
ambre e-342	Add 2% to 3% of this characterful Ambre to produce the deep, sweet Ambre note for your perfume's appealing final effect.
opoponax ambre e-392	Indicated in fragrances of Oriental type; adds piquancy to the Ambre note. Use from 2% to 5%.
aldehyde e-317	Provides the top note to the first arresting fragrance. Add only ½% to 1% for surprising results.

cyclamal • rose e-131 • ionones • floranol

SOLE AGENT IN THE U. S. A. FOR J. & E. SOZIO, GRASSE, FRANCE

MOUSSE DE CHENE ABSOLUTE • MOUSSE DE CHENE BRUT
STYRAX • OLIBANUM • OPOPONAX • TOLU • RESINOIDES

VERONA AROMATICS DIVISION

VERONA CHEMICAL COMPANY • 26 VERONA AVE., NEWARK, N. J.

Philadelphia College of Pharmacy Grants 214 Degrees

Four honorary degrees and 210 degrees in course were granted at the 130th commencement of the Philadelphia College of Pharmacy and Science on June 11.

Recipients of the honorary degrees of Doctor of Science were G. E. Archambault, chief pharmacist, Hospital Division, U. S. Public Health Service, Wm. W. Hosler, research and control vice-president, Strong, Cobb, Co.; H. H. Schaefer, Dean Brooklyn College of Pharmacy, Long Island University, and G. F. Smith, president, Johnson and Johnson.

30-Day Test Set for Chlorophyll Tablets

Olympic Distributors is planning a 30-day test campaign of Nids Chlorophyll tablets in San Diego.

Ungerer & Co. Opens New Branch Office in Chicago

Ungerer & Co. has announced the opening of their new branch office at 1791 West Howard St., Chicago 26, Ill. This branch will be managed under the joint supervision of Ira Bennett and J. R. Martin. The facilities accorded by this move will enable the Chicago Branch Office to better serve Ungerer & Co.'s customers in various mid-west states.

Mr. Bennett was formerly Ungerer's sales representative in the southern territory with headquarters located, originally in Ashville, N. C., and changed last year to Atlanta, Georgia. He was moved to the New York office as special sales representative in 1949. Last January he was transferred to Ungerer & Co.'s old Chicago Office and has been in this territory since that time. He has been in the essential oil industry for approximately 25 years. He will cover Ungerer's accounts in sections of Ohio, Michigan, Indiana as well as the city of Chicago itself and sections of the state of Illinois.

Mr. Martin began his career in the essential oil industry with Ungerer & Co. in 1945. He has occupied various positions in the organization and is completely familiar with Ungerer's operation. He was transferred to Chicago from the New York office in 1948. He will cover accounts in Chicago, sections of Illinois as well as the entire state of Wisconsin.

The establishment of Ungerer & Company's new office was handled under the supervision of W. A. Bush, general sales and advertising manager of the company.

Group Forms Award Publicity Agency

A group of American fashion and home furnishing consultants

Scandia Cosmetics Corp. has been cited by the Charm Institute's Marketing Division for the quality, fragrance and originality of its products. Above, Miss Karol Lindberg (left), the firm's fashion and beauty consultant, accepts the award from Miss Shelley Winters, motion picture actress.

have organized a new agency, Charm Institute, to bestow and publicize annual awards in these fields. Jay Sheppard is the organization's executive director.

Among our Friends

BASIL PEGUSHIN, chemist and perfumer has joined the organization of Max Factor & Co. to undertake perfume research work.

JAMES A. KING of the Nulmoline division of the American Molasses Co. received the Stroud Jordan Award from the American Assn. of Candy Technologists at a meeting in Hotel Stevens, Chicago, on Tuesday June 5.

ANTONIO TERABAL, partner in the firm of Hugo A. Davidson, Max Factor's distributor in Uruguay recently visited New York City and Hollywood, where he familiarized himself with the new products and plans.

MAURICE R. CHEZ, president of Sales Builders, Inc., distributors for Max Factor Hollywood Make-Up, held his annual western sales meeting in Los Angeles on May 18-20. Mr. Chez. then flew to Chicago for the annual eastern division sales meeting held May 25-27.

HUGO BELL has been elected president of Bourjois, Inc., New York, N. Y. succeeding NORMAN DAHL who has resigned.

BENSON STORFER, president of Parfums Corday, Inc., New York, N.Y. has returned from a business trip to Europe.

PATRICK DOLAN has been named district manager of the newly established Baltimore office of The Patterson Foundry & Machine Co. Mr. Dolan has been a sales engineer at the main office for a number of years.

DR. GEORGE O. CURME, Jr. has been elected vice-president in charge of research of Union Carbide and Carbon Corp. He heads all of the company's research activities. Since 1948 he has been vice-president in charge of chemical research, and for many years a vice-president of Bakelite Co. and Carbide and Carbon Chemicals Corp. both divisions of Union Carbide.

WILLIAM T. VANDEVEN has been appointed sales manager of the industrial and institutional division of Essential Chemicals Co. He was formerly a special representative of Procter & Gamble Distributing Co.

CHARLES T. LIPSCOMB, president of the Pepsodent division of Lever Bros., has been named president of the Sales Executives Club of New York City.

GEORGE S. McMILLAN, vice president of Bristol-Myers Co., has been named president of the Advertising Club of New York.

EDWARD J. PEMPSELL of the Wildroot Co. has been elected to the board of directors of the Buffalo World Trade Assn.

DAVID H. ROSS, president of Gair Co. Canada Ltd., has been named elected a director of Robert Gair Co., Inc. He takes the place of GEORGE M. WILLOUGHBY who resigned from the position.

FRED H. HAGGERSON, president of Union Carbide and Carbon Corp., has also been elected chairman of the board of directors. Mr. Haggerson has been president of Union Carbide since 1944 and has been associated with the corporation for over 30 years.

SYNFLEUR SERVICE

More Complete than Ever

Leading perfumers, soap and flavor manufacturers all over the world have known Synfleur Scientific Laboratories perfumers' flavor and soap makers' materials for over 61 years. From experience they have learned that Synfleur materials are of the highest quality and that they are dependably uniform. But of even more importance, any manufacturer who uses Synfleur materials soon finds that in working with him we strive to act as a part of his organization rather than as a factor outside of it.

Now, armed with many years of successful experience in helping manufacturers solve production and other problems and with our strengthened staff of perfume and flavor experts, we are better able than ever before to render superior and more complete service to our growing family of friends.

To assist our customers in every way possible the friendly advice and help of the recognized, broadly experienced and highly skilled specialists in charge of each major division of Synfleur Scientific Laboratories is freely available to them either in our laboratories or *in their own laboratories*. In addition the resources of our modern, completely equipped service laboratories are always available to help in the solution of difficulties due to scarcities or other production problems.

Perhaps we can help you improve the quality of your products and possibly point the way to lower production costs.

SYNFLEUR SCIENTIFIC LABORATORIES, MONTICELLO, N.Y., U.S.A. TRADE MARK REGISTERED IN U.S. PATENT OFFICE

Synfleur Scientific Laboratories, Inc. *Monticello, N.Y.*

FOUNDED 1889 BY ALOIS VON ISAKOVICS

ATLANTA · DETROIT · NEW YORK · HAVANA · RIO DE JANEIRO · MEXICO, D. F.

CHICAGO • MELBOURNE • BURMA • HONG KONG • BOGOTA • SAN JOSE
CIUDAD TRUJILLO • GUAYAQUIL • GUATEMALA CITY • CALCUTTA • WELLINGTON
MANAGUA • PANAMA • ASUNCION • MANILA • SAN SALVADOR • MONTEVIDEO

(Continued from page 43)
(2 lb) of fresh flowers delivered to the manufacturer, against 107 francs last year.

An important increase of price can be anticipated in these conditions on rose concrete and absolute, production being insufficient to meet needs.

Once the plantations are started, they require every year a sum of attention and care, such as pruning, fastening, tilling, fertilizing and, eventually and when possible, irrigation.

As flowers appear on the branches which have developed during the preceding year, pruning consists in cutting away the exhausted branches, keeping only the young ones, which are fastened together from one plant to the other in order to create an arcuation which is maintained every year, new branches replacing the old ones and so on. This arcuation is not done with the aid of a wire but, as already said, simply by twisting the branches together so as to form a continuous line. Owing to the thorny nature of the rose tree, the branches so fixed remain attached together without the aid of any fastening material. It is a quite unpleasant work to do as some thorns always manage to get through the leather gloves used for that purpose.

First tilling takes place at the beginning of March, when pruning is finished, manure and fertilizers being added at this occasion. Another dressing is done in autumn, deeper than the first one, in order to facilitate the penetration of winter rains into the ground. The surface is kept clean by hoeings, as frequent as necessary.

It is easy to understand that all this work, most usually done by hand, considerably increase the cost and it is only on large properties, which are not frequently met in this country, that machines are used.

Apart from these different dressings of the ground and plants, it is also necessary to take care of diseases and pests. Among the first, rust which is a kind of mildew and oidium or white disease, both due to a parasitic fungus on leaves. Rust is the most common and does a lot of damage. It appears usually in June when the weather is hot and dry causing the leaves to wither and fall, thus stopping for a while the normal growth of the rose trees. As all fungus diseases, rust and oidium cannot be cured once declared, the treatments must be applied before they appear, in order to destroy the spores at the early stage of their development. Copper sulphate or oxychoride prevent the rust, sublimed sulphur the oidium. The latter, when declared, can also be stopped with some synthetical organic colourings but the process is expensive and very seldom used.

The rot of the roots is the most dangerous of all diseases. It is also a fungus caused by the decomposition of organic matters, favoured by damp soils. Little can be done against it, the best thing to do is to choose a good healthy soil when starting a new plantation.

Chlorosis or green sickness is frequent in our calcareous soils. Powdered iron sulphate, which acidifies lime, is used to prevent it, with usually good results.

Among the insects, the green buprestis is by far the most dangerous: its worm digs spiral galleries under the bark at the ground level, thus stopping the circulation of the sap; the plant withers and the upper part dies. If it is a newly planted one, it often dies completely and has to be replaced. On a well rooted one, suckers appear at the top of the root and replace it.

The worm of the Vesperus Strepens also destroys the bark at the ground level, with the same results.

These insects causing a lot of damage on new plantations, growers take great care, when starting them, to detect the young plants which already contain a worm: they cut away the attacked part and burn it or even burn the whole if it cannot be utilized. New synthetical insecticides, such as H.C.H. give good results and their use will certainly generalize. In any case, strong amply fertilized and irrigated plants resist to these pests: if their upper part is destroyed, replacement suckers appear at the top of the roots and form a new plant.

The May Rose forms its first flowers the year following its plantation and attains its full production at the fourth year. Gathering begins usually around the middle of May and lasts a month. It is done in the evening or in the early morning, before the sun has evaporated the dew. When done in the evening, the flowers are left all night outside to recover their normal humidity. In every village, the growers bring their daily gathering to agents, who take care of the transport to the Grasse manufacturers.

The yield differs considerably from one plantation to the other, as can be easily understood, according to the nature of the soil, the attention given to the plants, the situation of the field. Evaluations are difficult to control and too often contradictory.

Under the old system of conventions, which was an agreement made between producers and perfumers, a uniform price was fixed for a period of three to five years, and a quantity of four to five thousand plants in the acre was admitted with a total production of 800 to 1,600 kilos (1,6 ton) or 200 to 300 grams per plant. Even with selected plants it is quite exceptional to obtain more than 1,600 kilos to the acre.

The plantations around Grasse covered at a time a surface of 1,700 acres and the production reached two thousand tons of flowers. This production has lessened every year, either because the old plantations have not been renewed or because they have been replaced by vegetables or vines, judged more profitable. Experience shows that even watched with the greatest care twenty to forty per cent of the young rose trees in a new plantation disappear after six months, destroyed by worms. They must be replaced the following year with a similar percentage of losses and three or four years are thus required to obtain a complete plantation. All this is very costly. Lack of labour during and between the two wars is also a reason of the disparition of many plantations.

It is now generally estimated that the surface covered does not exceed 300 acres.

The purchase price of the flowers by the Grasse manufacturers has been established for this crop according to its importance and will be paid as follows:

For a total tonnage of less than 250 tons: 200 francs per kilo, 250 to 275 tons: 195 francs per kilo, and so on with a diminution of five francs for every twenty five tons in supplement to finish at 150 francs for a maximum of 475 to 500 tons. In fact the price paid will probably be around 175/180 francs: it is the highest that has ever been paid.

BENJ. FRENCH, INC.

Essential Oils *Aromatic Chemicals*

DESCOLLONGES
PRODUCTS

MUGUET FLEURS A

The perfect synthesis of the exquisite Lily of the Valley perfume.

160 FIFTH AVENUE **NEW YORK 10, NEW YORK**

PLYMOUTH WAXES *For* CREAMS

PLYMOUTH Genuine Spermaceti U.S.P.

This Spermaceti should not be confused with inferior hydrogenated sperm oils which are sometimes offered as Spermaceti. The Plymouth Brand is the finest which can be produced and is produced from Genuine Sperm Oil by the cold pressing method. It is a very white crystalline wax containing no free oil, has a very low Iodine number and is free of any offensive odors.

PLYMOUTH Ozokerites

We offer two grades. One is the highest quality obtainable, 76°-78° C melting point and the other grade lower in price and of lower melting point 66°-68° C. Both are guaranteed 100% Pure Bleached Ozokerites.

PLYMOUTH Sun-bleached White Beeswax U.S.P.

This is guaranteed to be a 100% Pure Beeswax and sun-bleached. It is refined by the centrifugal method which removes all and every trace of foreign matter. We will gladly send samples.

PLYMOUTH White Cirine Wax

A special grade of White Ceresin Wax prepared for the cosmetic trade. Absolutely white and odorless. It has a melting point corresponding to that of Beeswax so that in using it in connection with Beeswax in cream any "lumpiness" is avoided. Its use will also produce a very glossy cream.

We offer all grades of the U.S.P. fully-refined Paraffin Waxes.

M. W. PARSONS-PLYMOUTH, Inc.

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Market Report

Market Generally Unsettled

PRICE developments in the raw materials market included an increase of 25¢ a pound in Californian coldpressed orange oil, reductions of 2¢ a pound in all of the stearates, and a decline of 2¢ in refined glycerin prices by a single refiner. Several of the aromatic chemicals displayed a softer tone including the ionones, citral, and citronellal in keeping with more favorable replcement costs of lemongrass and citronella oils.

Orange Oil Advances

The advance in orange oil was made by the Exchange Products Division, California Fruit Growers Exchange. Co-distributors of the Exchange oil are Fritzsche Brothers, Inc., and Dodge & Olcott, Inc., with main offices in New York City. An indication of the wide use of orange oil is clearly indicated by the fact that until this year, Florida produced over a million pounds annually. Because of a change in processing however, production in Florida has declined considerably, thus placing the burden of the demand for orange on the Californian product. According to latest estimates orange oil production in Florida is currently running at the rate of only about 300,000 to 400,000 pounds a year. In previous years Italy and Brazil supplied fair quantities but the low prices on orange prior to 1950 tended to discourage production. Moreover this year's prices from Italy have been so high that few importers have been able to purchase oil for resale in this market in the face of current economic restrictions.

Lemongrass and Citronella Oils

The downward price trend in both lemongrass and citronella oils was further extended over the past month because of new crop influences. While current prices on lemongrass are over $1 per pound below the years highest level of $5 the article is still regarded as high in price and trade generally has been restricted.

Glycerin Stronger

The reduction in refined glycerin prices by a single producer served to narrow the price range on chemically pure material. The makers new quotations are still above other refiners selling schedules by 3¾¢ a pound. The adjustment was made by the refiner to bring its prices more in line with lower costs of crude material. Although new business has proved rather quiet over the past month, some refiners reported a slight spurt in export inquiry and currently production of refined glycerin is moving into domestic consumer channels in good volume against outstanding orders. Behind the generally quiet tone to the market there is a decidedly strong outlook with some observers stating that they would not be surprised if allocations and delivery cutbacks would be necessary by Fall. Argentina is continuing to obtain better prices on its crude glycerin from European buyers and the loss of these imports estimated at approximately 300 tons a month will eventually be felt in this market especially if reports prove true that additional domestic production of synthetic material will be delayed until next year.

Stearates Down

The reduction in stearate prices affected the entire group namely aluminum, calcium, iron, lead, magnesium, and zinc. Producers explained that the more favorable selling schedules were made possible as the result of a series of reductions in stearic acid. The alcohol market remained quiet with the general tone being influenced by the presence of fair size stocks. Trade observers were of the opinion however that the generally quiet tone would only prove temporary. There is apparently sufficient imported alcohol in sight to take care of the rubber program since negotiations with India have been completed for a substantial gallonage to be exported to the United States. First shipments are scheduled to be made in August.

Vanilla Weaker

The reduction in the import duty as well as the cut in the tax on imports out of Madagascar have already been discounted in the vanilla bean market. The import duty on vanilla beans was reduced from 15¢ a pound to 7½¢. Contrary to the trend in other commodities vanilla bean prices have remained at ridiculously low levels. Some advices from Madagascar stated that because of the poor returns some growers are abandoning their plantations and are turning to coffee. Such reports are significant in the face of a narrow demand and a soft tone since the turn of events in the primary market will not be felt until next year.

Menthol Easier

Menthol lost some ground here over the past month despite the generally firm view of most importers regarding the longer term outlook. Brazilian menthol was available at $11.90 per pound while Chinese and Japanese menthol was offered at $12.30 to $12.40 per pound on a duty paid basis. Replacements from China remain cut off. Japan will not be able to offer any sizeable quantities until late this year when production from the new mint crop gets underway. Replacement costs in Brazil remain firm and high.

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ESSENTIAL OILS

All prices per lb. unless otherwise specified.

Almond Bit, FPA per lb.	3.25@	4.25
Sweet True	.65@	.90
Apricot Kernel	.55@	.70
Amyris	1.75@	2.50
Angelica Root	150.00@	190.00
Anise, U.S.P.	1.95@	2.20
Aspic (spike) Span	3.30@	3.90
Avocado	1.10@	1.50
Bay	1.70@	2.00
Bergamot	11.75	Nom'l
Artificial	3.65@	5.00
Birchtar, crude	1.65	Nom'l
Birchtar, rectified	4.25@	4.80
Bois de Rose	4.75@	5.50
Cade, U. S. P.	.40@	.60
Cajeput U. S. P.	2.50@	2.75
Cajuput (technical)	2.40@	2.55
Calamus	20.00@	25.00
Camphor "White"	.50@	.65
Cananga, native	8.25@	10.00
Rectified	9.50@	9.85
Caraway	4.05@	5.10
Cardamon	60.00@	85.00
Cascarillo	40.00@	48.00
Cassia, rectified, U. S. P.	5.25@	6.00
Cedar leaf U. S. P.	3.50@	3.75
Cedar Wood	.70@	.75
Celery	17.00@	17.75
Chamomile Hungarian	280.00@	325.00
Cinnamon oil, Bark	35.00@	50.00
Leaf	3.50	Nom'l
Citronella, Ceylon	2.00@	2.40
Java	1.95@	2.25
Java type	1.85@	2.20
Cloves, Zanzibar	3.00@	3.10
Madagascar	3.25@	3.50
Copaiba	2.50@	3.00
Coriander	30.00@	35.00
Croton	5.00@	6.20
Cumin	5.75@	7.25
Dill—		
Weed	4.25@	4.50
Seed	6.50@	6.85
Erigeron	5.35@	6.00
Eucalyptus	1.30@	1.55
Fennel, Sweet	2.45@	3.20
Garlic (oz.)	7.25@	7.70
Grapefruit	2.00@	2.50
Geranium, Rose, Algerian	26.00@	32.50
Bourbon	26.50@	32.00
Turkish	8.50@	10.00
Ginger	22.00@	25.00
Guaiac (Wood)	1.90@	2.20
Hemlock	2.50@	2.80
Juniper Berry	3.00@	4.25
Laurel leaf	4.00@	4.85
Lavandin	4.25@	5.00
Lavender, French	4.75@	10.00
Lemon, Calif.	5.00@	5.10
Italian	8.00	Nom'l
Lemongrass	3.85@	4.35
Limes, distilled	7.25@	7.85
Expressed	8.10@	8.80
Linaloe wood	4.25@	4.50
Lovage (oz.)	10.00@	12.00
Mace	4.55@	6.00
Marjoram	3.75@	4.50
Neroli, Bigarde P.	85.00@	95.00
Petale, extra NF	155.00@	180.00
Nutmeg	4.35@	5.10
Ocotea Cymbarum	.85@	1.00
Olibanum	5.30@	7.00
Opopanax	45.00@	48.00
Orange, Florida	3.00	Nom'l
Brazilian	1.50	Nom'l
Calif., exp.	2.75@	
Distilled	1.10@	
Orris Root, abs. (oz.)	65.00@	70.00
Artificial	36.00	Nom'l
Patchouli	19.00@	21.00
Pennyroyal, Amer.	4.10	Nom'l
European	5.00@	5.50
Peppermint natural	7.35@	7.65
Redistilled	7.85@	8.20
Petitgrain	3.65@	4.00
Pimento, Berry	4.95@	6.00
Leaf	2.35@	2.95
Pinus Sylvestris	2.65@	2.85
Pumilio	2.85@	3.20
Rose, Bulgaria (oz.)	40.00@	60.00
Synthetic, lb.	26.00@	32.00
Rosemary, Spanish	1.00@	1.50
Sage, Spanish	1.10@	2.00
Sage, Dalmatian	14.00@	15.25
Sandalwood, N. F.	12.50@	12.85
Sassafras—		
Artificial	.85@	1.25
Snake root	31.00@	35.00
Spearmint	5.45@	5.80
Spruce	2.50@	2.75
Sweet birch Southern	2.25@	3.00

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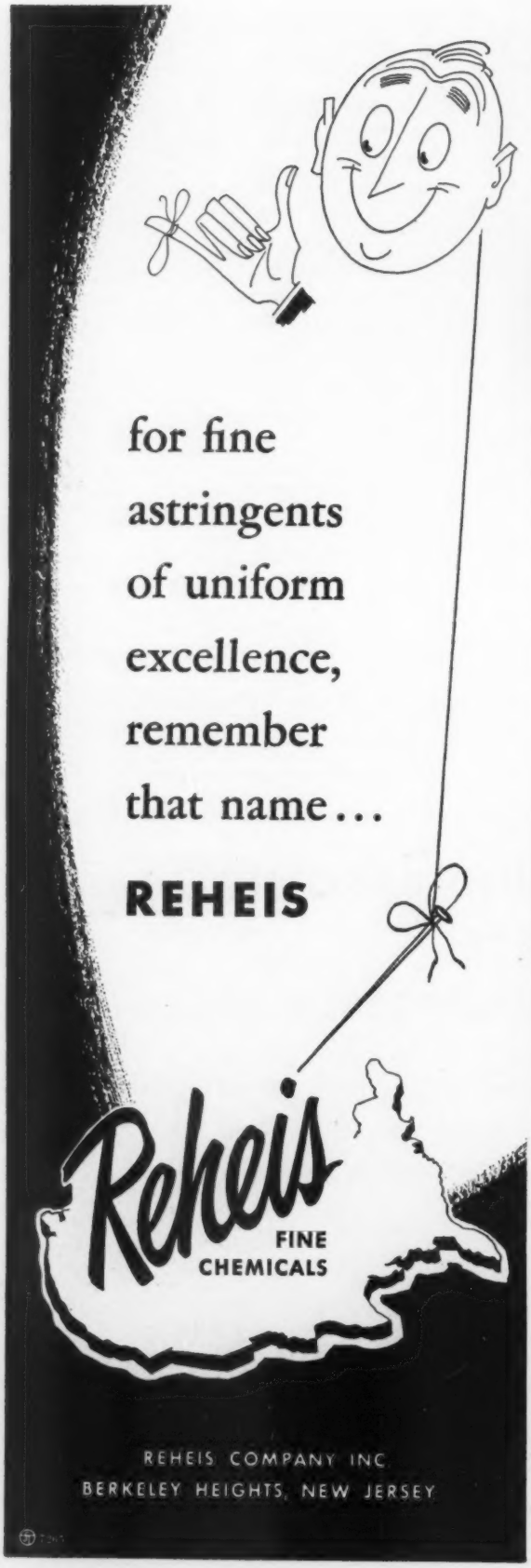

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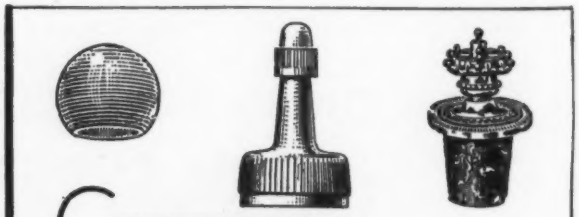

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Haitian	22.00@	25.00
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C 11	13.60@	14.50
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C 9	17.10@	17.30
C 10	8.35@	8.60
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Amyl Butyrate	1.00@	1.25
Amylcinnamic Aldehyde	2.20@	2.40
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Amyl Propionate	1.25@	1.60
Amyl Salicylate	.95@	1.10
Amyl Valerinate	2.00@	2.50
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Benzyl Acetate	.75@	.85
Benzyl Alcohol	.78@	.85
Benzyl Butyrate	2.00@	2.35
Benzyl Cinnamate	3.30@	3.60
Benzyl Formate	2.00@	2.30
Benzophenone	1.65@	1.85
Benzyl-Iso-Eugenol	9.75@	10.00
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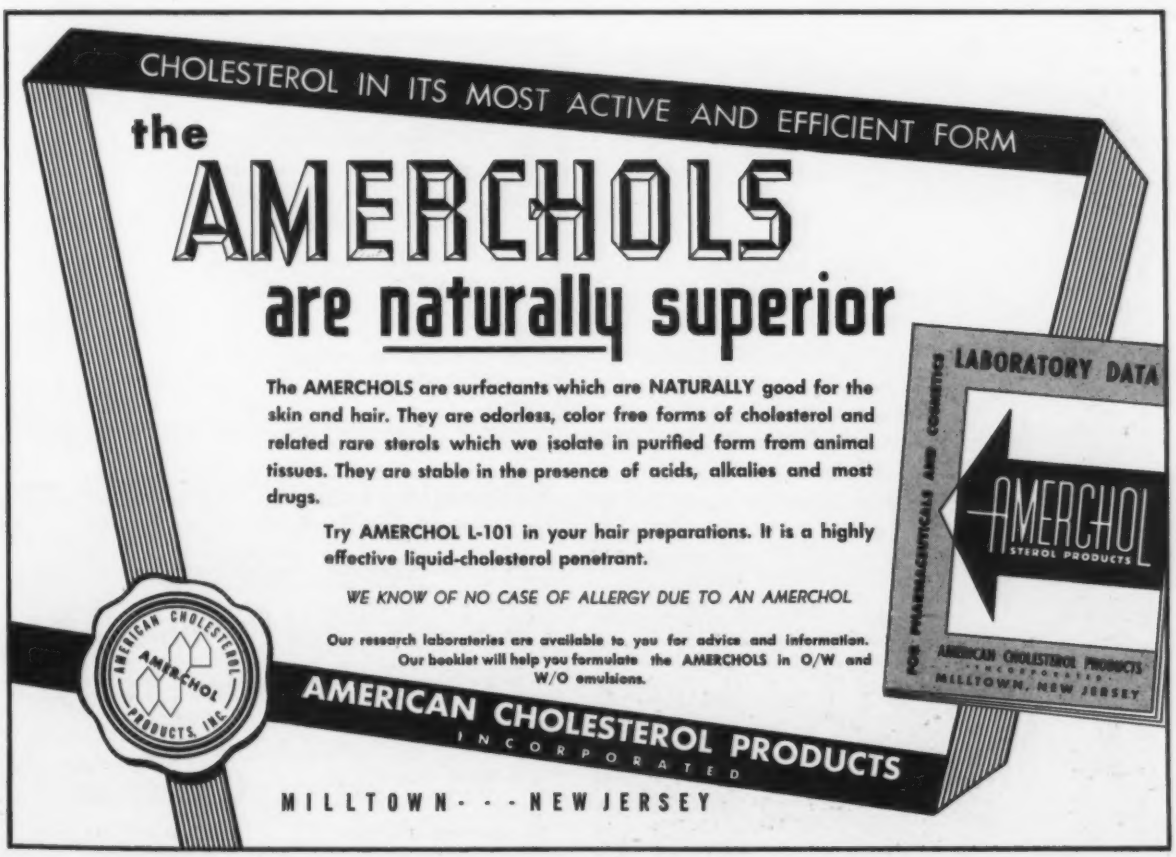
Benzyl Salicylate	1.90@	2.10
Benzylidene Acetone	2.00@	2.75
Bromstyrol	5.75@	6.35
Butyl Acetate, normal	19¼@	20¼
Cinnamic Alcohol	3.10@	3.75
Cinnamic Aldehyde	1.25@	1.40
Cinnamyl Acetate	3.75@	4.50
Citral, C. P.	8.10@	8.75
Citronellol	4.20@	4.50
Citronellyl Acetate	4.95@	5.20
Citronellyl Butyrate	6.50@	6.85
Coumarin	3.00@	3.50
Cuminic Aldehyde	5.90@	6.35
Diethylphthalate	.50@	.55
Dimethyl Anthranilate	5.75@	6.00
Diphenyl Methane	1.15@	1.40
Ethyl Acetate	.35@	.38
Ethyl Benzoate	.85@	.90
Ethyl Butyrate	.80@	.95
Ethyl Capronate	2.20@	3.15
Ethyl Cinnamate	2.45@	2.80
Ethyl Formate	.70@	.80
Ethyl Propionate	.90@	1.00
Ethyl Salicylate	1.00@	1.50
Ethyl Vanillin	6.75@	6.80
Eucalyptol	3.00@	3.75
Eugenol	3.65@	4.00
Geranoil, dom.	2.75@	3.25
Geranyl Acetate	3.90@	4.50
Geranyl Butyrate	6.30@	6.65
Geranyl Formate	6.35@	6.60
Guaiac Wood Acetate	4.65@	5.00
Heliotropin, dom.	3.50@	3.90
Hydrotropic Aldehyde	6.30@	6.85
Hydroxycitronellal	9.40@	10.00
Indol, C. P.	20.00@	22.00
Ionones		
Beta	10.25	Nom'l
Methyl	8.50	Nom'l
Iso-borneol	1.65@	1.80
Iso-butyl Acetate	1.00@	1.75
Iso-butyl Benzoate	1.10@	1.50
Iso-butyl Salicylate	2.15@	3.00
Iso-eugenol	4.65@	4.90
Iso-safrol	2.10@	2.80
Linalool	7.10@	7.85
Linalyl, Acetate 90%	6.85@	7.05
70%	4.85@	5.10
Linalyl Formate	13.05@	13.85
Linalyl Propionate	11.90@	12.50
Menthol	11.60@	12.30
Methyl Acetophenone	1.50@	1.90
Methyl Anthranilate	4.00	Nom'l
Methyl Benzoate	.60@	1.00
Methyl Cinnamate	1.75@	2.25
Methyl Heptenone	7.15@	8.00
Methyl Heptine Carbonate	45.00@	60.00
Methyl Naphthyl Ketone	4.75	Nom'l
Methyl Phenylacetate	1.20@	1.85
Methyl Salicylate	.55@	.80
Musk Ambrette	5.85	Nom'l
Ketone	5.30	Nom'l
Xylene	2.00	Nom'l
Neroline (ethyl ether)	2.50@	2.80
Paracresyl Acetate	2.20@	2.75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Paracresyl Phenyl-acetate .	4.75@	5.40
Phenylacetaldehyde 50% ..	2.75@	3.25
100%	4.10@	4.65
Phenylacetic Acid	1.65@	2.25
Phenylethyl Acetate	2.00@	2.50
Phenylethyl Alcohol	1.75@	2.00
Phenylethyl Butyrate	4.20@	4.50
Phenylethyl Propionate ...	3.40@	4.00
Phenylethyl Salicylate	4.35@	4.80
Phenylethyl Valerianate ..	5.70@	5.90
Phenylpropyl Acetate	3.50@	4.20
Safrol	1.25@	1.50
Scatol C. P. (oz.)	2.65@	3.40
Styrolyl Acetate	1.90@	2.50
Vanillin (clove oil)	5.00@	5.50
(guaiacol)	3.00@	3.05
Lignin	3.00@	3.05
Vetiver Acetate	47.50@	50.00
Violet Ketone Alpha	9.90@	10.25
Yara Yara (Methyl ether) .	2.25@	2.80

BEANS

Tonka Beans Surinam	1.00@	1.10
Angostura	1.75@	1.80
Vanilla Beans		
Bourbon	2.95@	3.30
Mexican, whole	6.00@	6.50
Mexican, cut	5.00@	5.40
Tahati	2.75@	2.95

SUNDRIES AND DRUGS

Acetone	.10¼@	.14
Ambergris, ounce	8.00@	17.50
Balsam, Copaiba	2.00@	2.50
Peru	2.40@	2.60
Beeswax, bleached, pure		
U. S. P.	.80@	.82
Yellow, refined	.73@	.75
Bismuth, subnitrate	2.65@	
Borax, crystals, carlot ton .	61.25@	81.25
Boric Acid, U. S. P., ton	129.00@	133.50
Calcium, Phosphate	.08@	.08¾
Phosphate, tri-basic	.06¾@	.07½
Camphor, pwd., domestic .	.60@	.62
Castoreum, nat., cans	7.10@	15.00
Cetyl, Alcohol	1.50@	1.55
Chalk, precip. bags, clts ..	.02⅞@	.03
Cherry Laurel Water, jug,		
gal.	1.25	Nom'l
Citric Acid	.28½@	.29½
Civet, ounce	4.50@	15.00
Cocoa butter, bulk	.71@	.72
Cyclohexanol (Hexalin) ..	.30@	.32
Fuller's Earth, Mines ton ..	27.00@	30.00
Glycerin, C. P.	.55¼@	.57
Gum Arabic, pwd.	.21@	.22
Amber	.15@	.15¾
Gum Benzoin, Siam	3.50@	3.85
Sumatra	.40@	.42
Gum Galbanum	.80@	.95
Gum Myrrh	.30@	.37
Henna, pwd.	.25@	.27
Kaolin	.05@	.07
Labdanum	5.00@	7.00
Lanolin, hydrous	.34@	.35
Anhydrous	.36@	.38
Magnesium, carbonate	.11¼@	.14
Stearate	.46@	.48
Musk, ounce	38.00@	45.00
Olibanum, tears	.20@	.25
Siftings	.16@	.18
Orange Flower Water, gal.	1.75@	2.25
Orris Root, Italian	.20@	.26
Paraffin	.06⅜@	.07⅛
Peroxide (hydrogen U. S. P.)		
bbls.	.03¾@	.05
Petrolatum, white	.06¾@	.08⅜
Quince Seed	1.00@	1.50
Rice Starch	.18@	.22
Rose flowers, pale	.40@	.48
Rose Water, jug (gal.)	1.50@	2.00
Rosin, M. per cwt.	9.95	
Salicylic Acid	.42@	Nom'l
Saponin No. 1	2.45@	2.60
Silicate, 40°, drums, works,		
100 pounds	1.10@	1.40
Sodium Carb.		
58% light, 100 pounds ..	1.60@	4.62
Hydroxide, 76% solid, 100		
pounds	3.35@	4.55
Spermaceti	.34@	.37
Stearate Zinc U. S. P.	.44@	.46
Styrax	1.50@	1.85
Tartaric Acid	.39½@	.41
Tragacanth, No. 1	4.25@	4.50
Triethanolamine	.26¼@	.27¼
Violet Flowers	1.85	Nom'l
Zinc Oxide, U. S. P. ctns. ..	.19¼@	.20¼

OILS AND FATS

Castor, refined, drums	.38¼@	.38¾
Coconut, crude, Atlantic		
ports, tanks	.14¼@	
Double distilled, drums .	.24¾@	.26
Corn, crude, Midwest, mill,		
tanks	.16½@	
Corn Oil, refined, tanks ..	.20@	
Cottonseed, crude tanks ..	.16½@	
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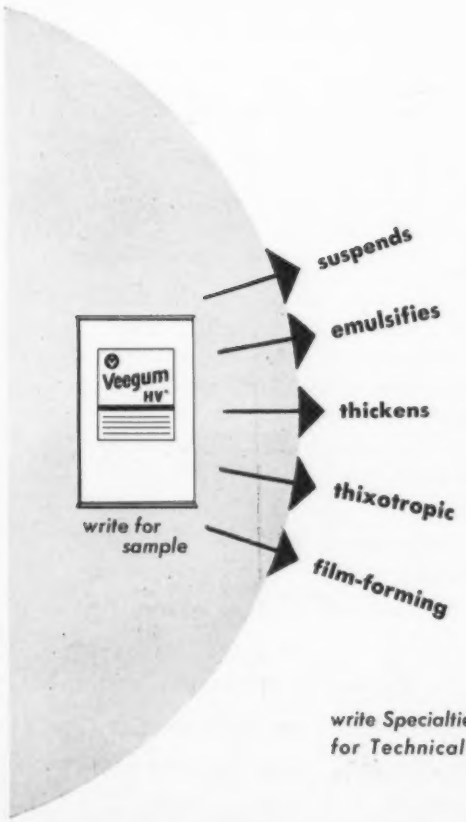

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